State: Pennsylvania Filing Company: Baltimore Life Insurance Company

TOI/Sub-TOI: LTC03I Individual Long Term Care/LTC03I.003 Other

Product Name: Long-Term Care

Project Name/Number: ERC LTC Rate Increase Filing/145MAI01-81.01

Filing at a Glance

Company: Baltimore Life Insurance Company

Product Name: Long-Term Care State: Pennsylvania

TOI: LTC03I Individual Long Term Care

Sub-TOI: LTC03I.003 Other

Filing Type: Rate - Other (Not M.U. or G.I. Product)

Date Submitted: 06/24/2019

SERFF Tr Num: MILL-131857009

SERFF Status: Assigned

State Tr Num: MILL-131857009

State Status: Received Review in Progress
Co Tr Num: ERC - BALTIMORE LIFE

Implementation On Approval

Date Requested:

Author(s): Missy Gordon, Courtney Williamson, Travis Reisch, Michael Emmert, Dexter Mosley, Cassi

Noel, Derek Lesniak, Matt Mickolichek

Reviewer(s): Jim Laverty (primary), Benjamin Irwin

Disposition Date:
Disposition Status:
Implementation Date:

State Filing Description:

Proposed aggregate 173% increase (140% for policies without inflation and 299% for those with) on 94 PA policyholders of Baltimore Life form 5812S(PA).

State: Pennsylvania Filing Company: Baltimore Life Insurance Company

TOI/Sub-TOI: LTC03I Individual Long Term Care/LTC03I.003 Other

Product Name: Long-Term Care

Project Name/Number: ERC LTC Rate Increase Filing/145MAI01-81.01

General Information

Project Name: ERC LTC Rate Increase Filing Status of Filing in Domicile: Not Filed

Project Number: 145MAI01-81.01 Date Approved in Domicile:

Requested Filing Mode: Review & Approval Domicile Status Comments: This filing is not being submitted in

Maryland.

Explanation for Combination/Other: Market Type: Individual Submission Type: New Submission Individual Market Type:

Overall Rate Impact: 173% Filing Status Changed: 06/24/2019

State Status Changed: 06/28/2019

Deemer Date: Created By: Matt Mickolichek

Submitted By: Michael Emmert Corresponding Filing Tracking Number:

State TOI: LTC03I Individual Long Term Care

Filing Description:

On behalf of the company, we are submitting the referenced rate filing for your review. This is an existing product(s) that provides long-term care coverage. This product(s) was issued in Pennsylvania from July 18, 2000 through February 26, 2003 and is no longer marketed in any jurisdiction.

The form(s) was acquired by MedAmerica Insurance Company (MedAmerica) through a reinsurance agreement. MedAmerica has 90% of the risk on this form(s), and administers and manages the entire block.

The company is requesting a premium rate increase on the form(s), including all associated riders. The need for a premium rate increase is due to emerging and projected experience running more adverse than previously expected.

The company is requesting a premium rate increase that varies by inflation protection option to achieve the cumulative rate increases shown in the enclosed cover letter. The rate increase levels were determined to vary by inflation option to better align the rate increase with adverse experience. The cover letter provides the average prior, requested, and cumulative rate increases for the form(s) by inflation protection option.

There have been no previous rate revisions on the form(s) in this jurisdiction since MedAmerica acquired the business. The company is seeking this current rate increase request to help alleviate the adverse performance on this block of business.

The company will offer insureds affected by the premium increase the option of reducing their policy benefits to provide flexibility of choice for those insureds who wish to maintain a premium level reasonably similar to what they were paying prior to the rate increase. The company will offer a contingent benefit upon lapse to insureds that trigger a substantial rate increase. Additionally, the company will voluntarily offer a contingent benefit upon lapse to insureds affected by the rate increase, even if the increase is not considered substantial. Where MedAmerica does not have complete historical premium information, it will make a consumer-friendly estimate of the historical premiums paid in calculating a contingent benefit upon lapse or nonforfeiture benefit.

If the cumulative requested rate increase is filed for use, a majority of policyholders will be eligible for a contingent benefit upon lapse. Enclosed with this filing is a plan, subject to the Department's review, which demonstrates that appropriate administration and claims processing procedures are in effect.

The company is currently preparing policyholder notification letters for this filing and will provide them to the Department via an amendment on SERFF once they are completed.

State: Pennsylvania Filing Company: Baltimore Life Insurance Company

TOI/Sub-TOI: LTC03I Individual Long Term Care/LTC03I.003 Other

Product Name: Long-Term Care

Project Name/Number: ERC LTC Rate Increase Filing/145MAI01-81.01

Company and Contact

Filing Contact Information

Michael Emmert, Associate Actuary michael.emmert@milliman.com

8500 Normandale Lake Blvd. 952-820-3116 [Phone]

Suite 1850

Minneapolis, MN 55437

Filing Company Information

(This filing was made by a third party - millimaninc)

Baltimore Life Insurance Company CoCode: 61212 State of Domicile: Maryland

10075 Red Run BoulevardGroup Code:Company Type:Owings Mills, MD 21117Group Name:Life/Accident/Health(410) 581-6635 ext. [Phone]FEIN Number: 52-0236900State ID Number:

Filing Fees

Fee Required? Yes
Fee Amount: \$125.00
Retaliatory? Yes

Fee Explanation: There is a \$125 filing fee in the state of domicile.

Per Company: Yes

CompanyAmountDate ProcessedTransaction #Baltimore Life Insurance Company\$125.0006/24/2019161689369

State: Pennsylvania Filing Company: Baltimore Life Insurance Company

TOI/Sub-TOI: LTC03I Individual Long Term Care/LTC03I.003 Other

Product Name: Long-Term Care

Project Name/Number: ERC LTC Rate Increase Filing/145MAI01-81.01

Rate Information

Rate data applies to filing.

Filing Method: Review and Approval

Rate Change Type: Increase
Overall Percentage of Last Rate Revision: 0.000%

Effective Date of Last Rate Revision:

Filing Method of Last Filing:

SERFF Tracking Number of Last Filing:

Company Rate Information

	Overall %	Overall %	Written Premium	Number of Policy	Written	Maximum %	Minimum %
Company	Indicated	Rate	Change for	Holders Affected	Premium for	Change	Change
Name:	Change:	Impact:	this Program:	for this Program:	this Program:	(where req'd):	(where req'd):
Baltimore Life Insurance Company	173.000%	173.000%	\$157,587	94	\$91,221	299.000%	140.000%

 State:
 Pennsylvania
 Filing Company:
 Baltimore Life Insurance Company

TOI/Sub-TOI: LTC03I Individual Long Term Care/LTC03I.003 Other

Product Name: Long-Term Care

Project Name/Number: ERC LTC Rate Increase Filing/145MAI01-81.01

Rate/Rule Schedule

Item No.	Schedule Item Status	Document Name	Affected Form Numbers (Separated with commas)	Rate Action	Rate Action Information	Attachments
1		Seriatim Rate Schedule	5812S(PA)	Revised	Previous State Filing Number: This form(s) was first issued in 2000. Percent Rate Change Request: 173	PA_Seriatim List_ERC_Baltimore Life_20190619.pdf,

Baltimore Life Insurance Company 10075 Red Run Boulevard, Owings Mills, MD 21117 Seriatim Listing of Pennsylvania Policyholders In Force as of December 31, 2017 Excludes Policies Assumed to be Paid Up Prior to Implementation of the Requested Rate Increase

Pennsylvania		Inflation					Current	Proposed	Proposed
Policy	_	Protection	Issue	Benefit	Elimination	Original Daily	Annualized	Annualized	Percentage
Count	Form	Option	Age	Period	Period	Benefit (\$)	Premium	Premium	Increase
1	5812S(PA)	None	33	3-year	30-day	100	\$97	\$233	140.0%
2	5812S(PA) 5812S(PA)	None None	35 42	3-year 5-year	30-day 30-day	100 150	\$113 \$365	\$272 \$875	140.0% 140.0%
4	5812S(PA)	None	43	4-year	30-day	180	\$544	\$1,306	140.0%
5	5812S(PA)	None	46	1-year	30-day	100	\$114	\$273	140.0%
6	5812S(PA)	None	48	1-year	30-day	100	\$131	\$315	140.0%
7	5812S(PA)	None	49	5-year	30-day	150	\$547	\$1,312	140.0%
8	5812S(PA)	None	51	3-year	30-day	100	\$351	\$842	140.0%
9	5812S(PA)	None	52	Lifetime	30-day	50	\$319	\$766	140.0%
10	5812S(PA)	None	52	Lifetime	90-day	100	\$661	\$1,586	140.0%
11 12	5812S(PA)	None None	54 55	3-year	60-day	250 70	\$1,188 \$276	\$2,851 \$661	140.0% 140.0%
13	5812S(PA) 5812S(PA)	None	56	3-year 5-year	90-day 30-day	100	\$276 \$700	\$1,680	140.0%
14	5812S(PA)	None	56	1-year	30-day	70	\$177	\$425	140.0%
15	5812S(PA)	None	57	Lifetime	30-day	50	\$429	\$1,029	140.0%
16	5812S(PA)	None	57	Lifetime	30-day	100	\$953	\$2,286	140.0%
17	5812S(PA)	None	57	Lifetime	30-day	150	\$1,286	\$3,086	140.0%
18	5812S(PA)	None	58	1-year	30-day	100	\$292	\$700	140.0%
19	5812S(PA)	None	58	Lifetime	30-day	200	\$1,854	\$4,450	140.0%
20	5812S(PA)	None	59	4-year	30-day	130	\$998	\$2,396	140.0%
21 22	5812S(PA)	None None	59 61	1-year	90-day	100 200	\$236 \$1,277	\$567 \$3,065	140.0% 140.0%
22	5812S(PA) 5812S(PA)	None	61	3-year 3-year	60-day 90-day	100	\$1,277 \$612	\$3,065 \$1,470	140.0%
24	5812S(PA)	None	61	4-year	30-day	150	\$1,341	\$3,219	140.0%
25	5812S(PA)	None	61	5-year	30-day	100	\$892	\$2,142	140.0%
26	5812S(PA)	None	62	3-year	90-day	70	\$517	\$1,241	140.0%
27	5812S(PA)	None	62	3-year	90-day	70	\$517	\$1,241	140.0%
28	5812S(PA)	None	62	3-year	90-day	100	\$665	\$1,596	140.0%
29	5812S(PA)	None	62	3-year	90-day	160	\$1,064	\$2,553	140.0%
30	5812S(PA)	None	62	5-year	30-day	150	\$1,530	\$3,673	140.0%
31	5812S(PA)	None	62	5-year Lifetime	60-day	100	\$884	\$2,121	140.0% 140.0%
32 33	5812S(PA) 5812S(PA)	None None	62 63	3-year	30-day 90-day	150 150	\$1,758 \$996	\$4,220 \$2,391	140.0%
34	5812S(PA)	None	63	4-year	60-day	100	\$866	\$2,078	140.0%
35	5812S(PA)	None	63	4-year	90-day	150	\$1,400	\$3,359	140.0%
36	5812S(PA)	None	63	Lifetime	30-day	100	\$1,260	\$3,023	140.0%
37	5812S(PA)	None	63	Lifetime	30-day	100	\$1,260	\$3,023	140.0%
38	5812S(PA)	None	64	3-year	90-day	100	\$1,202	\$2,884	140.0%
39	5812S(PA)	None	64	3-year	90-day	100	\$1,202	\$2,884	140.0%
40	5812S(PA)	None	64	3-year	90-day	150	\$1,081	\$2,595	140.0%
41	5812S(PA)	None	64	3-year	90-day	160	\$1,246	\$2,990 \$6,330	140.0%
42 43	5812S(PA) 5812S(PA)	None None	64 64	3-year 3-year	90-day 90-day	300 300	\$2,595 \$2,595	\$6,229 \$6,229	140.0% 140.0%
44	5812S(PA)	None	64	1-year	30-day	100	\$420	\$1,008	140.0%
45	5812S(PA)	None	64	1-year	90-day	100	\$316	\$758	140.0%
46	5812S(PA)	None	64	2-year	90-day	70	\$456	\$1,094	140.0%
47	5812S(PA)	None	65	3-year	30-day	130	\$1,390	\$3,336	140.0%
48	5812S(PA)	None	65	3-year	90-day	100	\$943	\$2,263	140.0%
49	5812S(PA)	None	65	3-year	90-day	100	\$786	\$1,886	140.0%
50 51	5812S(PA)	None	65 65	4-year	30-day	80	\$823	\$1,975	140.0%
51 52	5812S(PA) 5812S(PA)	None None	65 65	1-year 1-year	30-day 90-day	100 100	\$468 \$367	\$1,123 \$882	140.0% 140.0%
52	5812S(PA) 5812S(PA)	None	66	3-year	90-day 90-day	100	\$367 \$859	\$882 \$2,061	140.0%
54	5812S(PA)	None	66	3-year	90-day	150	\$1,545	\$3,709	140.0%
55	5812S(PA)	None	66	1-year	90-day	50	\$248	\$596	140.0%
56	5812S(PA)	None	66	1-year	90-day	100	\$447	\$1,073	140.0%
57	5812S(PA)	None	66	1-year	90-day	100	\$447	\$1,073	140.0%
58	5812S(PA)	None	67	3-year	30-day	100	\$1,226	\$2,943	140.0%
59	5812S(PA)	None	67	3-year	90-day	100	\$1,015	\$2,435	140.0%
60	5812S(PA)	None	67	1-year	90-day	70	\$306	\$735	140.0%
61	5812S(PA)	None	67 67	1-year	90-day	100	\$450 \$421	\$1,080 \$1,011	140.0%
62 63	5812S(PA) 5812S(PA)	None None	67 68	1-year 1-year	90-day 90-day	100 100	\$421 \$472	\$1,011 \$1,134	140.0% 140.0%
64	5812S(PA) 5812S(PA)	None	68	1-year 1-year	90-day 90-day	100	\$472 \$437	\$1,134 \$1,050	140.0%
65	5812S(PA)	None	69	3-year	90-day 90-day	100	\$1,351	\$3,243	140.0%
66	5812S(PA)	None	69	4-year	30-day	80	\$1,179	\$2,830	140.0%
67	5812S(PA)	None	69	1-year	30-day	100	\$710	\$1,703	140.0%
68	5812S(PA)	None	69	1-year	90-day	70	\$361	\$867	140.0%
69	5812S(PA)	None	70	4-year	90-day	100	\$1,566	\$3,758	140.0%
70	5812S(PA)	None	71	4-year	90-day	100	\$1,741	\$4,178	140.0%

Seriatim Listing

1

Baltimore Life Insurance Company 10075 Red Run Boulevard, Owings Mills, MD 21117 Seriatim Listing of Pennsylvania Policyholders In Force as of December 31, 2017 Excludes Policies Assumed to be Paid Up Prior to Implementation of the Requested Rate Increase

Pennsylvania		Inflation					Current	Proposed	Proposed
Policy		Protection	Issue	Benefit	Elimination	Original Daily	Annualized	Annualized	Percentage
Count	Form	Option	Age	Period	Period	Benefit (\$)	Premium	Premium	Increase
71	5812S(PA)	None	73	3-year	90-day	50	\$1,011	\$2,426	140.0%
72	5812S(PA)	None	73	4-year	90-day	70	\$1,653	\$3,968	140.0%
73	5812S(PA)	None	73	1-year	30-day	100	\$945	\$2,268	140.0%
74	5812S(PA)	None	73	1-year	90-day	100	\$741	\$1,779	140.0%
75	5812S(PA)	None	73	Lifetime	90-day	100	\$3,130	\$7,512	140.0%
76	5812S(PA)	None	74	5-year	30-day	100	\$2,979	\$7,150	140.0%
77	5812S(PA)	None	75	3-year	30-day	100	\$2,829	\$6,788	140.0%
78	5812S(PA)	Auto-Inflation	46	2-year	30-day	100	\$428	\$1,706	299.0%
79	5812S(PA)	Auto-Inflation	49	3-year	30-day	140	\$833	\$3,323	299.0%
80	5812S(PA)	Auto-Inflation	49	3-year	30-day	140	\$833	\$3,323	299.0%
81	5812S(PA)	Auto-Inflation	52	2-year	90-day	100	\$505	\$2,017	299.0%
82	5812S(PA)	Auto-Inflation	54	5-year	30-day	110	\$1,136	\$4,531	299.0%
83	5812S(PA)	Auto-Inflation	55	5-year	30-day	110	\$1,203	\$4,799	299.0%
84	5812S(PA)	Auto-Inflation	56	3-year	30-day	70	\$708	\$2,823	299.0%
85	5812S(PA)	Auto-Inflation	58	2-year	60-day	150	\$984	\$3,927	299.0%
86	5812S(PA)	Auto-Inflation	59	2-year	30-day	150	\$1,247	\$4,974	299.0%
87	5812S(PA)	Auto-Inflation	59	2-year	90-day	100	\$807	\$3,219	299.0%
88	5812S(PA)	Auto-Inflation	60	2-year	90-day	100	\$779	\$3,106	299.0%
89	5812S(PA)	Auto-Inflation	61	3-year	30-day	100	\$1,278	\$5,099	299.0%
90	5812S(PA)	Auto-Inflation	62	4-year	30-day	100	\$1,531	\$6,108	299.0%
91	5812S(PA)	Auto-Inflation	62	4-year	30-day	100	\$1,531	\$6,108	299.0%
92	5812S(PA)	Auto-Inflation	62	2-year	60-day	150	\$1,276	\$5,090	299.0%
93	5812S(PA)	Auto-Inflation	64	3-year	90-day	120	\$1,983	\$7,912	299.0%
94	5812S(PA)	Auto-Inflation	64	2-year	30-day	150	\$1,732	\$6,911	299.0%

Seriatim Listing 2

State: Pennsylvania Filing Company: Baltimore Life Insurance Company

TOI/Sub-TOI: LTC03I Individual Long Term Care/LTC03I.003 Other

Product Name: Long-Term Care

Project Name/Number: ERC LTC Rate Increase Filing/145MAI01-81.01

Supporting Document Schedules

Satisfied - Item:	Transmittal Letter (A&H)
Comments:	
Attachment(s):	PA_Cover Letter_Baltimore Life_ERC_LRRS_20190619.pdf
Item Status:	
Status Date:	
Bypassed - Item:	Actuarial Certification (A&H)
Bypass Reason:	Not applicable as this is not a form filing.
Attachment(s):	
Item Status:	
Status Date:	
Satisfied - Item:	Actuarial Memorandum and Explanatory Information (A&H)
Comments:	
Attachment(s):	PA_ActMemo_Baltimore Life_ERC_LRRS_20190619.pdf PA_Supplement_Baltimore Life_ERC_LRRS_20190619.pdf
Item Status:	
Status Date:	
Bypassed - Item:	Advertisements (A&H)
Bypass Reason:	Not applicable as this is not a form filing.
Attachment(s):	
Item Status:	
Status Date:	
Satisfied - Item:	Authorization to File (A&H)
Comments:	
Attachment(s):	Baltimore Life Letter of Authorization_20190529.pdf
Item Status:	
Status Date:	
Bypassed - Item:	Insert Page Explanation (A&H)
Bypass Reason:	Not applicable as this is not a form filing.
Attachment(s):	- · · ·
Item Status:	

ERFF Tracking #:	MILL-131857009	State Tracking #:	MILL-131857009		Company Tracking #:	ERC - BALTIMORE LIFE	
tate:	Pennsylvania			ing Company:	Baltimore Life Insu	rance Company	_
OI/Sub-TOI:		dual Long Term Care/LTC03I.0	003 Other				
roduct Name:	Long-Term C						
roject Name/Number:	ERC LTC Rat	te Increase Filing/145MAI01-81	1.01				
Status Date:							
Satisfied - Item:		Rate Table (A&H)					
Comments:		Rate tables are attached	d on the Rate/Rule S	chedule tab.			
Attachment(s):							
tem Status:							
Status Date:							
Bypassed - Item:		Replacement Form with	n Highlighted Change	s (A&H)			
Bypass Reason:		Not applicable as this is	not a form filing.				
Attachment(s):							
tem Status:							
Status Date:							
Bypassed - Item:		Reserve Calculation (A8	&H)				
Bypass Reason:		Not applicable as this is	not a form filing.				
Attachment(s):							
tem Status:							
Status Date:							
Bypassed - Item:		Variability Explanation ((A&H)				
Bypass Reason:		Not applicable as this is	not a form filing.				
Attachment(s):							
tem Status:							
Status Date:							
Satisfied - Item:		Numerical Data in Exce	l				
Comments:							
Attachment(s):		PA_Exhibits and Attach	ments_Baltimore Life	e_ERC_2019061	9.xlsb		
tem Status:							
Status Date:							
Satisfied - Item:		Claims and Administrati	ion Processing Plan				
Comments:							
Attachment(s):		MedAmerica Claims Pro	ocedures_20160128.	pdf			
tem Status:				•			
Status Date:							

 State:
 Pennsylvania
 Filing Company:
 Baltimore Life Insurance Company

TOI/Sub-TOI: LTC03I Individual Long Term Care/LTC03I.003 Other

Product Name: Long-Term Care

Project Name/Number: ERC LTC Rate Increase Filing/145MAI01-81.01

Satisfied - Item:	Additional Information Requested in Concurrent Filings
Comments:	
Attachment(s):	PA_Response to 20190320 Objection_Baltimore Life_ERC_LRRS_20190619.pdf PA_Response Attachments_Baltimore Life_ERC_20190619.xlsb
Item Status:	
Status Date:	

State: Pennsylvania Filing Company: Baltimore Life Insurance Company

TOI/Sub-TOI: LTC03I Individual Long Term Care/LTC03I.003 Other

Product Name: Long-Term Care

Project Name/Number: ERC LTC Rate Increase Filing/145MAI01-81.01

Attachment PA_Exhibits and Attachments_Baltimore Life_ERC_20190619.xlsb is not a PDF document and cannot be reproduced here.

Attachment PA_Response Attachments_Baltimore Life_ERC_20190619.xlsb is not a PDF document and cannot be reproduced here.



8500 Normandale Lake Blvd. Suite 1850 Minneapolis, MN 55437-3830

Tel +1 952 897 5300 Fax +1 952 897 5301

milliman.com

June 19, 2019

Honorable Jessica K. Altman Insurance Commissioner Pennsylvania Insurance Department (Department)

Via SERFF

Re: Baltimore Life Insurance Company (Baltimore Life)
Company NAIC # 61212
SERFF Tracking # MILL-131857009
Baltimore Life Series
Comprehensive Form

5812S(PA)

Dear Commissioner Altman:

On behalf of the company, we are submitting the referenced rate filing for your review. This is an existing product(s) that provides long-term care coverage. This product(s) was issued in Pennsylvania from July 18, 2000 through February 26, 2003 and is no longer marketed in any jurisdiction.

The above-listed form(s) was acquired by MedAmerica Insurance Company (MedAmerica) through a reinsurance agreement. MedAmerica has 90% of the risk on this form(s), and administers and manages the entire block.

The company is requesting a premium rate increase on the above-listed form(s), including all associated riders. The need for a premium rate increase is due to emerging and projected experience running more adverse than previously expected.

The company is requesting a premium rate increase that varies by inflation protection option to achieve the cumulative rate increases shown in the following table. The rate increase levels were determined to vary by inflation option to better align the rate increase with adverse experience. The following table provides the average prior, requested, and cumulative rate increases for the above-listed form(s) by inflation protection option.

Pennsylvania – Baltimore Life Rate Increase Request

Inflation Option	Prior Increase ^[1]	Requested Increase	Cumulative Increase ^[1]		
No Inflation	0%	140%	140%		
Auto Inflation	0	299	299		
Average ^[2]	0	173	173		

[1] Captures only the rate increases that have been or are being filed with the department of insurance after MedAmerica had acquired the business. [2] As of December 31, 2017 and excludes policies assumed to be paid up prior to implementation of the requested rate increase.

Offices in Principal Cities Worldwide

This work product was prepared solely to provide assistance to MedAmerica. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends recipient be aided by its own actuary or other qualified professional when reviewing the Milliman work product.



There have been no previous rate revisions on the above-listed form(s) in this jurisdiction since MedAmerica acquired the business. The company is seeking this current rate increase request to help alleviate the adverse performance on this block of business.

The company will offer insureds affected by the premium increase the option of reducing their policy benefits to provide flexibility of choice for those insureds who wish to maintain a premium level reasonably similar to what they were paying prior to the rate increase. The company will offer a contingent benefit upon lapse to insureds that trigger a substantial rate increase. Additionally, the company will voluntarily offer a contingent benefit upon lapse to insureds affected by the rate increase, even if the increase is not considered substantial. Where MedAmerica does not have complete historical premium information, it will make a consumer-friendly estimate of the historical premiums paid in calculating a contingent benefit upon lapse or nonforfeiture benefit.

If the cumulative requested rate increase is filed for use, a majority of policyholders will be eligible for a contingent benefit upon lapse. Enclosed with this filing is a plan, subject to the Department's review, which demonstrates that appropriate administration and claims processing procedures are in effect.

The company is currently preparing policyholder notification letters for this filing and will provide them to the Department via an amendment on SERFF once they are completed.

The following electronic items are included with this submission:

- cover letter
- letter from the company authorizing submission of this filing on its behalf
- claims and administration processing plan, as provided by MedAmerica
- actuarial memorandum
- supplement to the actuarial memorandum
- seriatim list of current and proposed premium rates
- exhibits and attachments in Excel

The required \$125 filing fee will be paid via Electronic Funds Transfer (EFT).

The contact person for this filing is:

Michael Emmert, ASA, MAAA Associate Actuary Milliman, Inc. 8500 Normandale Lake Blvd., Suite 1850 Minneapolis, MN 55437 (952) 820-3116 michael.emmert@milliman.com

Thank you for your assistance in reviewing this filing.

Respectfully

Missy Gordon, FSA, MAAA Principal and Consulting Actuary

MAG/mmm

Enclosures

Address: 10075 Red Run Boulevard, Owings Mills, Maryland 21117

Actuarial Memorandum

June 19, 2019

Product Number

Baltimore Life Series
Comprehensive Form 5812S(PA)

A rate increase is being requested on the above-listed long-term care policy form(s). This policy form(s) was issued in Pennsylvania from July 2000 through February 2003 and is no longer marketed in any jurisdiction.

The above-listed form(s) was acquired by MedAmerica Insurance Company (MedAmerica) through a reinsurance agreement with the Employers Reinsurance Corporation (ERC). MedAmerica manages the above-listed form(s) with other similar blocks of business it acquired and refers to the business as the "acquired from ERC" block. Certain policies within the block novated to MedAmerica paper. MedAmerica administers and has 50%-100% of the risk on the entire block acquired from ERC.

Four filings with the business acquired from ERC are concurrently being submitted in this jurisdiction for (1) Central States Health and Life Company of Omaha (CSO), (2) Highmark Life Insurance Company (Highmark), (3) Baltimore Life Insurance Company (Baltimore Life), and (4) MedAmerica on policies that novated to its paper.

This actuarial memorandum captures the nationwide experience of the above-listed policy form(s) and is pooled with certain business acquired from ERC.

1. Purpose of Filing

This actuarial memorandum has been prepared for the purpose of demonstrating that the requested rate increase discussed in Section 2 meets the minimum requirements of the applicable sections of the 2014 National Association of Insurance Commissioners (NAIC) Long-Term Care Insurance Model Regulation (Model Regulation). The enclosed supplement to the actuarial memorandum demonstrates compliance with the applicable regulatory requirements of this jurisdiction to the extent they differ from the Model Regulation, and includes other commonly requested information of this jurisdiction. It may not be suitable for other purposes.

2. Requested Rate Increase

Rate increases are being requested on the business acquired from ERC that vary by inflation protection option. The level of the requested rate increase may vary nationwide in order to achieve the same cumulative rate increase nationwide as shown in the table below, except where limited by regulatory restrictions. The rate increase levels were determined to vary by inflation protection option to better align the rate increase with the adverse experience.

Appendix A to this memorandum provides a description of the development of and justification for the assumptions used in this filing, which were used in analyzing the adverse experience. Appendix B to this memorandum provides additional details on the development of and justification for the above requested rate increase. Appendix B also provides demonstration that the requested rate increase does not recoup past losses.

The table below provides the average prior, requested, and cumulative rate increases based on the nationwide distribution of business for the business acquired from ERC. The enclosed cover letter provides similar information based on the jurisdiction-specific distribution and discloses the requested rate increase in this jurisdiction.

Address: 10075 Red Run Boulevard, Owings Mills, Maryland 21117

Actuarial Memorandum

June 19, 2019

Nationwide^[1] Average Rate Increase Request

Cohort	Inflation Protection Option	Prior Increase ^[2]	Requested Increase	Cumulative Increase ^[2]
Individual	No Inflation	18.0%	103.3%	140%
iliulviuuai	Auto Inflation	20.1	232.3	299
Group	No Inflation	0.0	140.0	140
Group	Auto Inflation	0.0	299.0	299
Average ^[3]		15.6	170.9	213

^[1] Enclosed cover letter discloses the jurisdiction-specific rate increase.

While the company does not currently anticipate additional rate increases, it will continue to monitor the business and reserves the right to request additional rate increases in the future.

Rate tables reflecting the current and proposed rate increases are enclosed with this filing in the format of a seriatim listing of affected policies. Included in the seriatim listing is the policy form, issue age, inflation protection option, benefit period, elimination period, original daily benefit, current annualized premium, proposed annual premium, and proposed percentage increase. Please note that the actual rates implemented may vary slightly from those in the enclosed seriatim listing due to implementation rounding algorithms.

As the company is not currently marketing new business, the required statement that the renewal premium rate schedules are not greater than the new business premium rate schedules is not applicable.

3. Description of Benefits

These products provide long-term care coverage. Each product has benefit eligibility requirements that involve activities of daily living (ADL) deficiencies or cognitive impairment. A daily benefit, benefit period, and elimination period were selected at issue.

At issue, the insured may have had the option to choose from the inflation options shown in Section 21. These automatic increasing benefits apply even when the insured is in claim status. The available choices for benefit period and elimination period are also shown in Section 21.

At issue the insured may have had the option of selecting additional riders that provide the following types of coverage: nonforfeiture, restoration of benefits, return of premium, shortened benefit period, spousal benefit transfer, survivorship benefit, dual waiver of subscription charges, shared benefit pool, cost of living increase or monthly home health care benefit. The insured may have had the option to select a lifetime or limited-pay premium payment option.

A contingent benefit upon lapse (CBUL) will be available to all insureds at the time of the rate increase as described in the enclosed cover letter.

4. Renewability

These policies are guaranteed renewable for life.

5. Applicability

This rate increase applies to all policies issued on the above-listed form(s) in this jurisdiction. The rate changes will apply to the premium of the base form and all applicable options and riders associated with the base form.

^[2] Captures only the rate increases that have been or are being filed with the

department of insurance after MedAmerica had acquired the business.

^[3] As of December 31, 2017 and excludes policies assumed to be paid up prior to implementation of the requested rate increase.

Address: 10075 Red Run Boulevard, Owings Mills, Maryland 21117

Actuarial Memorandum

June 19, 2019

6. Actuarial Assumptions

The following assumptions are used to project the experience shown in this filing.

- a. Morbidity reflects claim costs developed using the 2014 Milliman Long-Term Care Guidelines (Guidelines) with adjustments for underwriting selection, an all-lives exposure basis, and three years of retrospective improvement to bring the Guidelines forward to 2017. The claim costs were further adjusted based on historical claim experience by attained age, duration, individual vs. group, payment type, and coverage type, to the extent credible. These adjustment factors can be found in Exhibit A-4a of Appendix A to this memorandum.
- b. Mortality Rates reflect the 1994 Group Annuitant Mortality (GAM) Static gender-distinct table with retrospective improvement applied to bring this table forward to 2017. These mortality rates are further adjusted based on historical mortality experience by individual/group, issue age band and duration as shown in the following tables.

	Mortality Durational Adjustment Factors for Individual Business											
							Age					
Duration*	<25	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+
1	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	20%
2	35	35	35	35	35	35	35	35	35	35	35	30
3	40	40	40	40	40	40	40	40	40	40	40	45
4	43	43	43	43	43	43	43	43	44	45	45	50
5	46	46	46	46	46	46	46	46	48	50	50	55
6	49	49	49	49	49	49	49	49	52	55	55	60
7	52	52	52	52	52	52	52	52	56	60	60	65
8	55	55	55	55	55	55	55	55	60	65	65	70
9	56	56	56	56	56	56	56	56	61	68	69	76
10	57	57	57	57	57	57	57	57	62	71	73	82
11	58	58	58	58	58	58	58	58	63	74	77	88
12	59	59	59	59	59	59	59	59	64	77	81	94
13	60	60	60	60	60	60	60	60	65	80	85	100
14	62	62	62	62	62	62	62	62	69	82	88	101
15	64	64	64	64	64	64	64	64	73	84	91	102
16	66	66	66	66	66	66	66	66	77	86	94	103
17	68	68	68	68	68	68	68	68	81	88	97	104
18	70	70	70	70	70	70	70	70	85	90	100	105
23	70	70	70	70	70	70	70	85	90	100	105	105
28	70	70	70	70	70	70	85	90	100	105	105	105
33	70	70	70	70	70	85	90	100	105	105	105	105
38	70	70	70	70	85	90	100	105	105	105	105	105
43	70	70	70	85	90	100	105	105	105	105	105	105
48	70	70	85	90	100	105	105	105	105	105	105	105
53	70	85	90	100	105	105	105	105	105	105	105	105
58	85	90	100	105	105	105	105	105	105	105	105	105
63	90	100	105	105	105	105	105	105	105	105	105	105
68	100	105	105	105	105	105	105	105	105	105	105	105
73+	105	105	105	105	105	105	105	105	105	105	105	105

^{*} The assumption varies by duration for 18+, but is shown every five years for display purposes.

Address: 10075 Red Run Boulevard, Owings Mills, Maryland 21117

Actuarial Memorandum

June 19, 2019

	Mortality Durational Adjustment Factors for Group Business											
						Issue		•				
Duration*	<25	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75+
1	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	40%
2	70	70	70	70	70	70	70	70	70	70	70	60
3	80	80	80	80	80	80	80	80	80	80	80	90
4	86	86	86	86	86	86	86	86	88	90	90	100
5	92	92	92	92	92	92	92	92	96	100	100	105
6	83	83	83	83	83	83	83	83	88	94	94	102
7	83	83	83	83	83	83	83	83	90	96	96	104
8	83	83	83	83	83	83	83	83	90	98	98	105
9	81	81	81	81	81	81	81	81	88	98	99	105
10	79	79	79	79	79	79	79	79	86	98	101	105
11	77	77	77	77	77	77	77	77	83	98	102	105
12	74	74	74	74	74	74	74	74	81	97	102	105
13	72	72	72	72	72	72	72	72	78	96	102	105
14	74	74	74	74	74	74	74	74	82	98	105	105
15	76	76	76	76	76	76	76	76	86	99	105	105
16	77	77	77	77	77	77	77	77	90	101	105	105
17	79	79	79	79	79	79	79	79	94	102	105	105
18	81	81	81	81	81	81	81	81	98	104	105	105
23	77	77	77	77	77	77	77	94	99	105	105	105
28	74	74	74	74	74	74	89	95	105	105	105	105
33	70	70	70	70	70	85	90	100	105	105	105	105
38	70	70	70	70	85	90	100	105	105	105	105	105
43	70	70	70	85	90	100	105	105	105	105	105	105
48	70	70	85	90	100	105	105	105	105	105	105	105
53	70	85	90	100	105	105	105	105	105	105	105	105
58	85	90	100	105	105	105	105	105	105	105	105	105
63	90	100	105	105	105	105	105	105	105	105	105	105
68	100	105	105	105	105	105	105	105	105	105	105	105
73+	105	105	105	105	105	105	105	105	105	105	105	105

^{*} The assumption varies by duration for 18+, but is shown every five years for display purposes.

c. <u>Voluntary Lapse Rates</u> vary by policy duration and premium payment option. All policies are in duration 7 or later as of the valuation date. The lifetime-pay voluntary lapse rates are shown in the table below.

Duration	Voluntary Lapse Rate
7	2.50%
8	2.00
9	1.75
10	1.50
11	1.25
12+	1.25

The voluntary lapse rates in the above table were adjusted based on the following criteria for the limited-pay options.

- For the ten-pay option, a reduction of 65% of the above lapse rates is assumed for durations one through four, a reduction of 70% of the above lapse rates is assumed for durations five through eight, and 0% lapse thereafter.
- For the paid up at age 65 option, a reduction of 50% of the above lapse rates is assumed until age 55, a reduction of 75% of the above lapse rates is assumed for ages 55 to 59, and 0% lapse thereafter.

Address: 10075 Red Run Boulevard, Owings Mills, Maryland 21117

Actuarial Memorandum

June 19, 2019

d. <u>Benefit Expiry Rates</u> reflect assumed policy termination due to exhaustion of benefits on limited benefit period policies. The rates are based on the *Guidelines* with adjustments for historical benefit expiry experience and vary by gender, benefit period, and attained age as shown in the following table.

	Benefit						Attaine	d Age*				
Gender	Period in Years	<65	65	70	75	80	85	90	95	100	105	110+
Female	<1.5	0.0%	0.1%	0.1%	0.3%	0.7%	2.5%	6.1%	10.7%	13.4%	16.7%	33.0%
	1.5 - 2.5	0.0	0.0	0.1	0.2	0.5	1.6	4.5	8.7	11.7	16.3	33.0
	2.5 - 3.5	0.0	0.0	0.1	0.1	0.4	1.2	3.4	6.9	9.7	15.0	33.0
	3.5 - 4.5	0.0	0.0	0.0	0.1	0.3	1.0	2.5	5.0	7.8	13.2	33.0
	4.5 - 6.0	0.0	0.0	0.0	0.1	0.2	0.7	1.7	3.8	6.3	11.2	33.0
	6.0 - 8.5	0.0	0.0	0.0	0.0	0.1	0.3	0.9	2.5	4.3	6.9	33.0
	8.5 - 12	0.0	0.0	0.0	0.0	0.0	0.1	0.3	8.0	1.7	2.8	33.0
	12+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Male	<1.5	0.0	0.0	0.1	0.2	0.5	1.5	3.9	6.3	7.8	9.4	33.0
	1.5 - 2.5	0.0	0.0	0.1	0.1	0.3	1.0	2.5	4.3	5.4	7.3	33.0
	2.5 - 3.5	0.0	0.0	0.1	0.1	0.2	0.7	1.7	3.0	4.0	5.8	33.0
	3.5 - 4.5	0.0	0.0	0.0	0.1	0.1	0.4	1.1	2.0	2.8	4.6	33.0
	4.5 - 6.0	0.0	0.0	0.0	0.0	0.1	0.3	8.0	1.5	2.3	3.6	33.0
	6.0 - 8.5	0.0	0.0	0.0	0.0	0.0	0.1	0.3	1.0	1.7	2.1	33.0
	8.5 - 12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	0.7	33.0
	12+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

^{*} The assumption varies by attained age, but is shown every five years for display purposes.

e. <u>Policyholder Behavior Due to the Rate Increase.</u> At the time of a rate increase, insureds have the option to elect a CBUL or reduced benefit options (RBO). An increase in morbidity for adverse selection due to the rate increase based on the percentage of policies that elect CBUL and RBO is assumed.

Insureds who elect a CBUL are modeled as a lapse (i.e., the CBUL benefit is not modeled), which results in a slightly lower lifetime loss ratio than if the CBUL benefit had been modeled. The following table provides the CBUL and RBO election rates, reduction to premiums and benefits due to the impact of RBO elections, and increase in morbidity for lifetime-pay policies based on the nationwide cumulative rate increase level by inflation protection option. Limited-pay policies are assumed to not elect CBUL or RBO.

Policyholder Behavior Assumptions^[1]

Inflation Protection Option	CBUL Election Rate	RBO Election Rate	Approximate Reduction for RBO	Morbidity Increase for Adverse Selection
No Inflation	11%	20%	13%	5.5%
Auto Inflation	12	25	21	6.5

[1] The values shown are based on the cumulative amounts found in Section 2. The assumption is applied on a seriatim basis and prorated for the requested increase needed to achieve the cumulative amounts in Section 2.

- f. <u>Interest Rate</u> consistent with the maximum valuation interest rate applicable to the year of issue (ranges from 4.5% to 5.5% and averages 5.1%) is used to demonstrate compliance with the minimum loss ratio requirements.
- g. Annual Improvement in the mortality and morbidity assumptions is assumed for 15 years starting in 2018. Annual mortality improvement factors vary by attained age based on the G2 improvement

Address: 10075 Red Run Boulevard, Owings Mills, Maryland 21117

Actuarial Memorandum

June 19, 2019

scale from the 2012 Individual Annuity Mortality table. Annual morbidity improvement is assumed to be 1.0%.

h. <u>Expenses</u> have not been explicitly projected for the purpose of demonstrating compliance with minimum loss ratio requirements. Documentation regarding the originally filed expense assumptions is not available. MedAmerica's current expense assumptions are assumed to be appropriate. Commissions will not be paid on any increase in premium.

The above assumptions are based on the experience of the above-listed policy form(s) and, where appropriate, other similar business issued by MedAmerica (including its affinity partners and acquired blocks of business), industry experience, and actuarial judgment. The above assumptions are deemed reasonable for the particular policy form(s) in this filing and are considered "most likely" (without explicit margin).

In establishing the assumptions described in this section, the policy design, underwriting, and claims adjudication practices for similar forms priced by MedAmerica during a similar era were taken into consideration. Appendix A to this memorandum provides a description of the development of and justification for the assumptions used in this filing.

The company is not currently marketing long-term care products. As a result, the requirement to reflect on any assumptions that deviate from those used for pricing other forms currently available for sale is not applicable.

7. Marketing Method

Agents and brokers of the company may have marketed these products based on MedAmerica's marketing method for its other products marketed during a similar era.

8. Underwriting Description

The individual products were underwritten with selective use of underwriting tools, which may have included the application, medical records, an attending physician's statement, telephone interview, and/or face-to-face assessment based on MedAmerica's underwriting for its other products during a similar era. The group products may have been issued on a guaranteed basis or subject to limited underwriting.

9. Premiums

Premiums are unisex and payable for life. The premiums may vary by policy form, issue age, elimination period, benefit period, initial daily benefit, inflation option, premium payment option, group discount, marital status at issue, and the selection of any riders.

10. Issue Age Range

Issue ages are from 17 to 80 based on nationwide in-force policies as of December 31, 2017.

11. Area Factors

No changes are being made to any area factors that may have been used in original pricing.

Address: 10075 Red Run Boulevard, Owings Mills, Maryland 21117

Actuarial Memorandum

June 19, 2019

12. Premium Modalization Rules

The following modal factors and percent distributions (based on the nationwide in-force count as of December 31, 2017) are applied to the annual premium (AP):

Premium Mode	Modal Factors	Percent Distribution
Annual	1.00*AP	41%
Semi-Annual	0.52*AP	11
Quarterly	0.27*AP	19
Monthly	0.09*AP	29

13. Reserves

Active life reserves and reserves for the election of a CBUL have not been used in the experience exhibits for this rate increase analysis except as described in the supplement to the actuarial memorandum. Claim reserves as of December 31, 2017 have been discounted to the incurral date of each respective claim and included in historical incurred claims. An incurred but not reported (IBNR) reserve balance as of December 31, 2017 has been allocated to the 2017 calendar year and included in historical incurred claims.

14. Trend Assumptions

As this is not medical insurance, an explicit medical cost trend is not included in the projections.

15. Demonstration of Satisfaction of Loss Ratio Requirements

This filing uses nationwide experience of the above-listed policy form(s) and is pooled with certain business acquired from ERC. The pooled experience is appropriate to increase credibility and allow for a uniform rate increase request across the blocks of business. Applying a uniform rate increase to the pool of forms maintains the pricing relations of the product design and differences between individual and group business.

Further, pooling this experience is appropriate because MedAmerica administers, manages the entire block (including claims handling), and has 50%-100% of the risk on the business acquired from ERC via a reinsurance agreement.

Note the pooled experience of the business acquired from ERC includes one short-term care policy form. This policy form accounts for 1.5% of the total business in-force and 0.1% of historical incurred claims. This policy form is included in the experience consistent with how the block was acquired from ERC.

Exhibit I provides actual and projected experience using current assumptions. Historical experience is estimated on a seriatim basis from inception to December 31, 2003. Actual experience is provided from 2004 through 2017. Future projected experience is on a seriatim basis from January 1, 2018 for 60 years using the current assumptions described above in Section 6. The actual and projected experience is based on nationwide premiums that reflect prior rate increases filed on the business acquired from ERC, which average 15.6% (shown above in Section 2) across all jurisdictions. The after increase projected experience reflects the additional increase needed to achieve the cumulative increases shown in Section 2 on a seriatim basis.

Values in Exhibit I are shown (a) before and (b) after the nationwide requested rate increase. Included are calendar year earned premiums, incurred claims, end of year lives, and annual loss ratios. As shown in Exhibit I-b, the anticipated lifetime loss ratio with the nationwide requested rate increase exceeds the minimum loss ratio required by pre-rate stability regulation.

Address: 10075 Red Run Boulevard, Owings Mills, Maryland 21117

Actuarial Memorandum

June 19, 2019

The following table demonstrates that the nationwide lifetime loss ratios in aggregate, by individual and group business, and by inflation protection option exceed the minimum loss ratio required by pre-rate stability regulation. The table below also provides the nationwide lifetime loss ratios by company in this jurisdiction. Please note that most of the company-specific experience is not fully credible, but is being provided for reference. The 'All' row corresponds to that shown in Exhibit I.

Nationwide Lifetime Loss Ratios at the Maximum Valuation Interest Rate

Company ^[1]	Cohort	Inflation Protection Option	Before Increase	After Increase
All	All	All	86%	83%
All	Individual	All	85	82
All	Group	All	120	88
All	All	No Inflation	81	80
All	All	Auto Inflation	120	96
Baltimore Life	Individual	All	65	49
CSO	Individual	All	88	85
Highmark	Group	All	134	96
MedAmerica (Novated Policies)	Individual	All	93	68

^{[1] &#}x27;All' reflects the pool of certain business acquired from ERC whereas the experience by company reflects nationwide experience for that company only.

Exhibit II provides a demonstration that the nationwide requested rate increase meets the alternative 58%/85% test required by post-rate stability regulation. The majority of policies subject to this rate increase are eligible for a CBUL, so an alternative version of the 58%/85% test, which uses the greater of 58% and the expected lifetime loss ratio, is provided per post-rate stability regulation. The expected loss ratio (65%) is used as a substitute for the original pricing loss ratio that was determined at pricing based on an assumed mix of business sold.

Exhibit II shows that the sum of the accumulated value of incurred claims without the inclusion of active life reserves, and the present value of projected incurred claims, without the inclusion of active life reserves, will not be less than the sum of the following:

- 1. Accumulated value of the initial earned premium times 65%,
- 2. 85% of the accumulated value of prior premium rate schedule increases,
- 3. Present value of projected initial earned premium times 65%, and
- 4. 85% of the present value of projected premium in excess of the projected initial earned premium.

The projected incurred claims in Exhibit II were increased by 15% from the current assumptions described in Section 6 to reflect assumptions that include moderately adverse conditions.

The following table demonstrates that the alternative 58%/85% test is passed in aggregate, by individual and group business, and by inflation protection option. The table below also provides a demonstration of the alternative 58%/85% test by company in this jurisdiction. Please note that most of the company-specific experience is not fully credible, but is being provided for reference. The 'All' row corresponds to that shown in Exhibit II. Dollar values in the table are shown in millions. The 'Alternative to 58% Loss Ratio' represents the greater of 58% and the expected lifetime loss ratio.

Address: 10075 Red Run Boulevard, Owings Mills, Maryland 21117

Actuarial Memorandum

June 19, 2019

Nationwide Alternative 58%/85% Test

		Inflation Protection	Alternative to 58%			
Company ^[1]	Cohort	Option	Loss Ratio	Item 5 ^[2]	Item 7 ^[3]	Result ^[4]
All	All	All	65%	\$345	\$445	Pass
All	Individual	All	64	335	430	Pass
All	Group	All	66	11	15	Pass
All	All	No Inflation	65	298	371	Pass
All	All	Auto Inflation	62	47	74	Pass
Baltimore Life CSO	Individual Individual	AII AII	58 65	3 289	2 382	Fail Pass
Highmark	Group	All	67	4	6	Pass
MedAmerica (Novated Policies)	Individual	All	58	4	5	Pass

^{[1] &#}x27;All' reflects the pool of certain business acquired from ERC whereas the experience by company reflects nationwide experience for that company only.

16. Actual-to-Expected Experience

The following table provides a comparison of actual and projected nationwide experience using current assumptions to that expected by individual and group business, inflation protection option, and by company in this jurisdiction. Values in the following table are shown (a) before and (b) after the requested rate increase.

Nationwide Actual and Expected Loss Ratios

		Inflation	Life	time Loss F	Ratio	Actual-to-	-Expected
		Protection	Before	After		Before	After
Company ^[1]	Cohort	Option	Increase	Increase	Expected	Increase	Increase
All	All	All	87%	83%	65%	1.34	1.29
All	Individual	All	86	83	64	1.33	1.28
All	Group	All	116	86	66	1.76	1.31
All	All	No Inflation	82	81	65	1.26	1.25
All	All	Auto Inflation	118	96	62	1.91	1.54
Baltimore Life	Individual	All	61	46	58	1.06	0.81
CSO	Individual	All	88	85	65	1.36	1.32
Highmark	Group	All	131	94	67	1.94	1.40
MedAmerica (Novated Policies)	Individual	All	87	65	57	1.51	1.12

^{[1] &#}x27;All' reflects the pool of certain business acquired from ERC whereas the experience by company reflects nationwide experience for that company only. Note that most of the company-specific experience is not fully credible, but is being provided for reference.

Actual and projected experience in the above table is identical to that described in Exhibit I, except uses the current most-likely interest rate assumption of 5.00%. This rate represents MedAmerica's expectation of its long-term investment earnings rate based on the average net investment earnings rate projected for MedAmerica's 2017 cash flow testing.

Expected experience uses the same policies at inception as in Exhibit I and projects from issue on a seriatim basis using the expected pricing assumptions for each form or, if not available, the expected pricing assumptions from another individual or group policy form that was priced during a similar era.

Exhibit III provides a comparison of the current and expected assumptions that underlie the actual and expected experience described above.

^[2] Item 5 is the Lifetime Earned Premium (in millions) Times Prescribed Factor.

^[3] Item 7 is Lifetime Incurred Claims with Rate Increase (in millions).

^[4] Test of whether Item 7 is not less than Item 5.

Address: 10075 Red Run Boulevard, Owings Mills, Maryland 21117

Actuarial Memorandum

June 19, 2019

17. History of Previous Rate Revisions

Please see the enclosed cover letter, which provides the jurisdiction-specific average prior rate increase history for the above-listed form(s). Section 2 above describes the pooled experience average prior rate increase.

18. Analysis Performed to Consider a Rate Increase

The experience table in Section 16 above demonstrates that experience has been more adverse from that expected as the A:E loss ratios exceed 1.0. The adverse experience is due to a combination of higher persistency, higher morbidity, and lower interest.

For the business subject to rate stability regulation, an analysis of the projected loss ratio compared to that assumed at the time of original pricing revealed that experience has unfolded more than moderately adverse and crossed the original pricing threshold for which the company could consider a rate increase. During the era when this product was priced, MedAmerica management determined the threshold for future increases would be defined as experience exhibiting deterioration of more than 10% of premium compared to that expected. Section 16 demonstrates that the 'All' lifetime loss ratio before the requested rate increase using current assumptions (87%) is in excess of the expected threshold.

19. Average Annual Premium in Pennsylvania (Based on December 31, 2017 In-Force)

The number of insureds and the corresponding average annual premium that will be affected by this and the identical rate increase filing(s) in this jurisdiction are shown in the table(s) below by inflation protection option and by company. The values provided in the table(s) below exclude policies assumed to be paid up prior to implementation of the requested rate increase.

_				
חם	nn	C1/1	va	กเร
ГС		syl	va	HIC

Company	Inflation Protection Option	Number of Insureds	Before Increase Premium	After Requested Increase Premium
	No Inflation	77	\$941	\$2,258
Baltimore Life	Auto Inflation	17	1,105	4,410
	Total	94	970	2,647
	No Inflation	4	790	1,895
CSO	Auto Inflation	3	576	2,298
	Total	7	698	2,068
	No Inflation	40	317	762
Highmark	Auto Inflation	153	337	1,345
	Total	193	333	1,224
MadAmariaa	No Inflation	2	4,844	11,625
MedAmerica (Novated Policies)	Auto Inflation	6	1,422	5,672
(Novaled Folicies)	Total	8	2,277	7,160
	No Inflation	123	797	1,912
Total	Auto Inflation	179	450	1,797
	Total	302	591	1,844

20. Proposed Effective Date

This rate increase will apply to policies on their next premium payment date following at least a 60-day policyholder notification period following being filed for use by the department of insurance.

Baltimore Life Insurance Company
Address: 10075 Red Run Boulevard, Owings Mills, Maryland 21117

Actuarial Memorandum

June 19, 2019

21. Distribution of Business as of December 31, 2017 (Based on Nationwide In-Force Insured Count)

Issue Ages	Percent Distribution
<40	6%
40-44	5
45-49	6
50-54	9
55-59	16
60-64	27
65-69	21
70-74	8
75+	2

Elimination Period	Percent Distribution
0-Day	15%
20-Day	13
30-Day	27
60-Day	2
90-Day	31
100-Day	10
150-Day	<1
180-Day	1

Benefit Period	Percent Distribution
90 Days	4%
1 Year	4
2 Years	6
3 Years	12
1200 Days	1
4 Years	27
5 Years	4
6 Years	9
7 Years	1
9 Years	1
10 Years	1
Lifetime	30

Inflation Option	Percent Distribution
None	51%
Guaranteed Purchase Option	4
10% Flex Benefit Increase	2
3% Simple for Life	3
4% Simple for 25 Years	3
5% Simple for 10 Years	1
5% Simple for 20 Years	3
5% Simple for Life	2
6% Simple for Life	<1
3% Compound for Life	2
5% Compound for 20 Years	9
5% Compound for Life	18
6% Compound for Life	<1

Address: 10075 Red Run Boulevard, Owings Mills, Maryland 21117

Actuarial Memorandum

June 19, 2019

Premium Payment Option	Percent Distribution
Ten-Pay	<1%
Paid Up at 65	<1
Lifetime-Pay	100

Coverage Type	Percent Distribution
Facility Only	41%
Comprehensive	59

22. Number of Insureds and Annualized Premium (Based on December 31, 2017 In-Force)

The number of insureds and annualized premium that will be affected by this and the identical rate increase filing(s) in this jurisdiction and nationwide are shown in the tables below by individual and group business, inflation protection option, and by company. The values provided in the tables below exclude policies assumed to be paid up prior to implementation of the requested rate increase.

Pennsylvania

Pennsylvania										
Company	Inflation Protection Option	Number of Insureds	Annualized Premium							
	No Inflation	77	\$72,429							
Baltimore Life	Auto Inflation	17	18,791							
	Total	94	91,220							
	No Inflation	4	3,159							
CSO	Auto Inflation	3	1,728							
	Total	7	4,887							
	No Inflation	40	12,694							
Highmark	Auto Inflation	153	51,577							
	Total	193	64,271							
M = -1 A =	No Inflation	2	9,687							
MedAmerica (Novated Policies)	Auto Inflation	6	8,530							
(Novaled Folicles)	Total	8	18,217							
	No Inflation	123	97,970							
Total	Auto Inflation	179	80,626							
	Total	302	178,596							

Baltimore Life Insurance Company Address: 10075 Red Run Boulevard, Owings Mills, Maryland 21117

Actuarial Memorandum

June 19, 2019

Nationwide - Business Acquired from ERC

Cohort	Inflation Protection Option	Number of Insureds	Annualized Premium
	No Inflation	867	\$950,960
Individual ^[1]	Auto Inflation	419	578,124
	Total	1,286	1,529,084
	No Inflation	52	38,262
Group	Auto Inflation	251	230,217
	Total	303	268,479
	No Inflation	919	989,222
Total ^[1]	Auto Inflation	670	808,341
	Total	1,589	1,797,563

^[1] Excludes the number of insureds and annualized premium in force for the short-term care policy form, which has 80 lives and \$27,979 annualized premium.

Address: 10075 Red Run Boulevard, Owings Mills, Maryland 21117

Actuarial Memorandum

June 19, 2019

23. Actuarial Certification

I am a Principal and Consulting Actuary for Milliman, Inc. and retained by MedAmerica to render an opinion with regard to long-term care insurance rates. I am a member of the American Academy of Actuaries. I meet the Academy's qualification standards to render this actuarial opinion and am familiar with the requirements for filing long-term care insurance premiums and rate increases.

This memorandum has been prepared in conformity with all applicable Actuarial Standards of Practice, including Actuarial Standards of Practice No. 8, "Regulatory Filings for Health Benefits, Accident and Health Insurance, and Entities Providing Health Benefits" and 18, "Long-Term Care Insurance".

I hereby certify that, to the best of my knowledge and judgment, this rate submission is in compliance with the applicable laws and regulations of this jurisdiction and the rules of this department of insurance.

In my opinion, the rates are not excessive or unfairly discriminatory, and bear reasonable relationship to the benefits based on the loss ratio standards of this jurisdiction.

This filing will enhance premium adequacy, but may not be sufficient to prevent future rate action. Additional rate increases are needed to certify that rates will remain stable under moderately adverse conditions.

In forming my opinion, I have used actuarial assumptions and actuarial methods (which gave consideration to policy design, underwriting, and claim adjudication) and such tests of the actuarial calculations as I considered necessary. Based on these assumptions, or statutory requirements where necessary, the premium rate filing is in compliance with the loss ratio standards of this jurisdiction.

I have relied on data and information provided by MedAmerica to develop this memorandum, including but not limited to management's view of when a rate change may be considered, policy design, underwriting and claim adjudication process, seriatim in-force data, claim data, and the company's long-term earnings rate. I have not audited or independently verified the data and information provided, but have reviewed it for reasonableness.

The basis for contract reserves has been previously filed and there is no anticipation of any changes.

Missy Gordon, FSA, MAAA Principal and Consulting Actuary

Date: June 19, 2019

Exhibit I-a Business Acquired from ERC

Actual and Projected Experience using Current Assumptions by Calendar Year Nationwide Experience Before Requested Rate Increase All Policies

				Los	s Ratio Demonstr			
			Without Interest				ith Max. Val. Intere	
		A	В	C = B / A	D	E	F	G = F / E
	Calendar	Earned	Incurred	Incurred	End of Year	Earned	Incurred	Incurred
	Year	Premium	Claims	Loss Ratio	Lives	Premium	Claims	Loss Ratio
	Prior to 1990*	19,471,030	11,763,375	60%	15,481	92,792,989	55,828,646	60%
	1990-1994*	49,503,696	33,451,695	68%	31,453	195,550,852	132,006,463	68%
	1995-1999*	33,965,293	22,595,289	67%	26,015	100,851,836	68,089,817	68%
	2000*	5,852,480	3,973,312	68%	5,122	14,275,523	10,013,387	70%
	2001*	5,731,966	4,024,540	70%	5,134	13,151,890	9,588,427	73%
	2002*	5,816,956	4,182,431	72%	5,161	12,543,895	9,407,328	75%
	2003*	5,659,125	4,283,850	76%	4,913	11,535,267	9,116,952	79%
	2004	4,851,492	3,867,067	80%	4,233	9,375,071	7,771,837	83%
Historical	2005	4,473,512	5,230,993	117%	3,956	8,213,731	10,069,789	123%
Experience	2006	4,113,381	4,493,396	109%	3,680	7,174,274	8,157,038	114%
	2007	3,799,390	3,973,568	105%	3,460	6,294,794	6,825,624	108%
	2008	3,524,686	4,456,795	126%	3,232	5,552,241	7,162,482	129%
	2009	3,245,673	3,296,327	102%	3,012	4,863,497	5,112,535	105%
	2010	3,234,353	3,996,079	124%	2,795	4,608,343	5,842,638	127%
	2011	3,168,608	3,316,985	105%	2,617	4,300,631	4,591,586	107%
	2012	2,927,975	4,440,508	152%	2,426	3,787,988	5,785,968	153%
	2013	2,700,932	4,314,175	160%	2,274	3,331,060	5,346,313	160%
	2014	2,518,716	4,577,100	182%	2,122	2,962,860	5,434,172	183%
	2015	2,317,354	6,125,594	264%	1,979	2,601,480	6,896,248	265%
	2016	2,134,431	6,939,547	325%	1,833	2,287,181	7,451,414	326%
	2017	1,928,017	5,139,462	267%	1,673	1,972,782	5,261,190	267%
	2018	1,742,971	4,748,346	272%	1,545	1,703,512	4,638,548	272%
	2019	1,586,419	4,724,737	298%	1,425	1,481,379	4,406,429	297%
	2020	1,439,215	4,691,857	326%	1,310	1,284,316	4,179,817	325%
	2021	1,301,483	4,647,463	357%	1,203	1,110,143	3,956,738	356%
	2022	1,173,195	4,599,601	392%	1,101	956,734	3,743,876	391%
	2023	1,054,234	4,538,514	431%	1,007	822,079	3,533,028	430%
	2024	943,781	4,484,721	475%	918	703,823	3,339,824	475%
	2025	842,274	4,413,669	524%	836	600,774	3,144,928	523%
	2026	749,642	4,327,232	577%	760	511,462	2,950,506	577%
	2027	663,887	4,203,927	633%	690	433,282	2,742,900	633%
Drainatad	2028	586,562	4,064,389	693%	626	366,203	2,537,482	693%
Projected	2029	516,725	3,901,159	755%	566	308,602	2,330,374	755%
Future	2030 2031	454,047	3,734,344	822% 895%	511 462	259,397	2,134,178	823% 895%
Experience		397,816	3,559,259			217,396	1,945,967	
(60 Years)	2032 2033	347,592	3,377,055	972% 1,060%	416 374	181,686	1,766,231 1,605,694	972% 1,060%
	2033	302,874	3,209,336		336	151,415		·
	2034	263,104	3,059,726	1,163%	302	125,791	1,464,129	1,164% 1,275%
	2036	227,827 196,662	2,902,929 2,728,439	1,274% 1,387%	270	104,162 85,975	1,328,476 1,193,926	1,389%
					241			1,509%
	2037 2038	169,218 145,155	2,551,795 2,379,820	1,508% 1,639%	215	70,731 58,005	1,067,582 951,823	1,641%
	2038	124,114	2,218,318	1,787%	191	47,413	848,192	1,789%
	2039	105,808	2,210,310	1,767%	169	38,637	753,514	1,769%
	2040	89,928	1,914,439	2,129%	149	31,389	668,938	2,131%
	2041	76,201	1,788,206	2,347%	131	25,422	597,468	2,350%
	2042	64,360	1,670,615	2,596%	115	20,523	533,661	2,600%
	2043	54,186	1,547,357	2,856%	101	16,514	472,627	2,862%
	2044	45,485	1,431,303	3,147%	88	13,250	418,030	3,155%
	2045	38,077	1,321,385	3,470%	76	10,602	369,074	3,481%
	2046	31,781	1,208,139	3,801%	66	8,458	322,669	3,815%
	2047	94,082	4,681,373	4,976%	213	22,295	1,106,005	4,961%
	2053-2057	35,472	2,826,909	7,969%	90	6,741	539,251	7,999%
	2058-2062	12,267	1,453,587	11,850%	32	1,878	224,574	11,957%
	2063-2067	3,656	531,968	14,551%	9	453	66,739	14,731%
	2068-2072	834	145,457	17,444%	2	84	14,761	17,586%
	2073-2077	125	27,433	21,996%	0	10	2,256	22,079%
1.0-	tor/	170,939,064	140 442 004	070/	132,571	500 000 104	385,759,854	76%
	story ture	170,939,064	148,442,084 105,676,347	87% 665%	132,571	508,028,184 11,780,539	385,759,854 61,900,217	76% 525%
	time	186,820,123	254,118,430	136%	149,119	519,808,723	447,660,071	525% 86%
LIIE	· ui i lo	100,020,123	207,110,430	130 /0	140,118	010,000,120	TT1,000,01 I	00 /0

*Estimated as described in Section 15 of the actuarial memorandum

Exhibit I-b Business Acquired from ERC Actual and Projected Experience using Current Assumptions by Calendar Year Nationwide Experience After Requested Rate Increase All Policies

				Loss	s Ratio Demonstration With Max. Val. Interest				
			Without Interest						
		Α	В	C = B / A	D	E	F	G = F / E	
	Calendar	Earned	Incurred	Incurred	End of Year	Earned	Incurred	Incurred	
	Year	Premium	Claims	Loss Ratio	Lives	Premium	Claims	Loss Ratio	
	Prior to 1990*	19,471,030	11,763,375	60%	15,481	92,792,989	55,828,646	60%	
	1990-1994*	49,503,696	33,451,695	68%	31,453	195,550,852	132,006,463	68%	
	1995-1999*	33,965,293	22,595,289	67%	26,015	100,851,836	68,089,817	68%	
	2000*	5,852,480	3,973,312	68%	5,122	14,275,523	10,013,387	70%	
	2001*	5,731,966	4,024,540	70%	5,134	13,151,890	9,588,427	73%	
	2002*	5,816,956	4,182,431	72%	5,161	12,543,895	9,407,328	75%	
	2003*	5,659,125	4,283,850	76%	4,913	11,535,267	9,116,952	79%	
	2004	4,851,492	3,867,067	80%	4,233	9,375,071	7,771,837	83%	
Historical	2005	4,473,512	5,230,993	117%	3,956	8,213,731	10,069,789	123%	
Experience	2006	4,113,381	4,493,396	109%	3,680	7,174,274	8,157,038	114%	
•	2007	3,799,390	3,973,568	105%	3,460	6,294,794	6,825,624	108%	
	2008	3,524,686	4,456,795	126%	3,232	5,552,241	7,162,482	129%	
	2009	3,245,673	3,296,327	102%	3,012	4,863,497	5,112,535	105%	
	2010	3,234,353	3,996,079	124%	2,795	4,608,343	5,842,638	127%	
	2011	3,168,608	3,316,985	105%	2,617	4,300,631	4,591,586	107%	
	2012	2,927,975	4,440,508	152%	2,426	3,787,988	5,785,968	153%	
	2013	2,700,932	4,314,175	160%	2,274	3,331,060	5,346,313	160%	
	2014	2,518,716	4,577,100	182%	2,122	2,962,860	5,434,172	183%	
	2015	2,317,354	6,125,594	264%	1,979	2,601,480	6,896,248	265%	
	2016	2,134,431	6,939,547	325%	1,833	2,287,181	7,451,414	326%	
	2017	1,928,017	5,139,462	267%	1,673	1,972,782	5,261,190	267%	
	2018	1,742,971	4,748,346	272%	1,545	1,703,512	4,638,548	272%	
	2018	2,376,575	4,337,995	183%	1,262	2,219,554	4,045,642	182%	
	2020	2,909,198	3,936,202	135%	1,161	2,596,197	3,506,955	135%	
	2020			147%	1,065	2,254,849		147%	
	2021	2,643,433	3,881,763	160%	976		3,305,226	159%	
		2,394,533	3,824,025			1,952,688	3,113,016		
	2023	2,162,439	3,755,069	174%	892	1,686,111	2,923,588	173%	
	2024	1,945,475	3,692,334	190%	813	1,450,613	2,750,161	190%	
	2025	1,744,992	3,615,953	207%	741	1,244,363	2,576,961	207%	
	2026	1,561,058	3,528,203	226%	673	1,064,711	2,406,127	226%	
	2027	1,387,301	3,411,647	246%	611	904,998	2,226,403	246%	
	2028	1,231,559	3,283,326	267%	554	768,443	2,050,287	267%	
Projected	2029	1,090,012	3,137,756	288%	501	650,526	1,874,791	288%	
Future	2030	962,218	2,990,985	311%	453	549,255	1,709,782	311%	
Experience	2031	846,783	2,839,508	335%	409	462,295	1,552,882	336%	
(60 Years)	2032	742,988	2,684,373	361%	368	387,928	1,404,366	362%	
	2033	649,952	2,543,128	391%	332	324,521	1,272,776	392%	
	2034	566,659	2,417,919	427%	298	270,544	1,157,405	428%	
	2035	492,314	2,288,748	465%	267	224,736	1,047,787	466%	
	2036	426,234	2,146,831	504%	239	186,019	939,792	505%	
	2037	367,730	2,003,726	545%	213	153,419	838,644	547%	
	2038	316,178	1,864,865	590%	190	126,091	746,201	592%	
	2039	270,899	1,734,649	640%	169	103,259	663,572	643%	
	2040	231,361	1,608,269	695%	150	84,285	588,129	698%	
	2041	196,947	1,489,836	756%	132	68,569	520,837	760%	
	2042	167,098	1,388,400	831%	116	55,596	464,122	835%	
	2043	141,284	1,294,265	916%	102	44,921	413,653	921%	
	2044	119,055	1,196,444	1,005%	89	36,173	365,634	1,011%	
	2045	100,003	1,104,984	1,105%	78	29,036	322,897	1,112%	
	2046	83,737	1,018,882	1,217%	68	23,235	284,738	1,225%	
	2047	69,883	930,883	1,332%	59	18,532	248,762	1,342%	
	2048-2052	206,270	3,613,293	1,752%	189	48,693	854,148	1,754%	
	2053-2057	76,567	2,187,488	2,857%	80	14,493	417,542	2,881%	
	2058-2062	25,792	1,120,668	4,345%	29	3,936	173,211	4,400%	
	2063-2067	7,521	408,224	5,428%	8	930	51,225	5,507%	
	2068-2072	1,704	110,916	6,509%	2	171	11,257	6,570%	
	2073-2077	256	20,773	8,112%	0	21	1,709	8,145%	
			•	•			•		
	story	170,939,064	148,442,084	87%	132,571	508,028,184	385,759,854	76%	
	ture	30,258,979	86,160,676	285%	14,835	21,713,221	51,468,776	237%	
Life	etime	201,198,043	234,602,760	117%	147,406	529,741,405	437,228,630	83%	

Lifetime 201,198,043 234,602,760
*Estimated as described in Section 15 of the actuarial memorandum

Exhibit II

Business Acquired from ERC

Demonstration that the Requested Rate Increase Passes the 65%/85% Loss Ratio Minimum Nationwide Experience with Prior Approved Increases All Policies

Accumulated value of initial earned premium	504,697,061 x	65%	=	325,536,641
2a Accumulated value of earned premium2b Accumulated value of prior premium rate schedule increases (2a - 1)	508,028,184 3,331,124 x	85%	=	2,831,455
3 Present value of future projected initial earned premium	8,045,745 x	65%	=	5,189,618
4a Present value of future projected premium 4b Present value of future projected premium in excess of the projected initial earned premiums (4a - 3)	21,713,221 13,667,476 x	85%	=	11,617,354
5 Lifetime Earned Premium Times Prescribed Factor: Sum of 1, 2b, 3, and 4b				345,175,068
6a Accumulated value of incurred claims without the inclusion of active life reserves 6b Present value of future projected incurred claims without the inclusion of active life reserves				385,759,854 59,189,092
7 Lifetime Incurred Claims with Rate Increase: Sum 6a and 6b				444,948,946
8 Test: 7 is not less than 5				Pass

All values are accumulated or discounted at the maximum valuation interest rate for contract reserves applicable for the year of issue, which ranges from 4.5% to 5.5%. Future projected initial earned premium schedule (i.e., without the requested rate increase) reflects the assumed impact of CBUL and RBO.

The future projected incurred claims (item 6b) were increased by 15% to reflect assumptions with moderately adverse experience.

Current Assumptions	All Series
Expected Assumptions	All Series

	litv	

Claim costs are developed using the 2014 Milliman Long-Term Care Guidelines (Guidelines) with adjustments for underwriting selection, an all-lives exposure basis, and three years of retrospective improvement to bring the Guidelines forward to 2017. The claim costs were further adjusted based on historical claim experience by attained age, duration, individual vs. group, payment type, and coverage type, to the extent credible.

Claim costs were derived from expected pricing proxy claim costs provided by the company, with adjustments as needed to replicate individual or group policy forms priced during a similar era.

Current Assumptions	All Series
Expected Assumptions	American, Baltimore Life, Highmark Life Series BCBSKC, Carefirst, GHMSI, MetLife Investors, Protective Life 500, Protective Life ANC-1110 Series CSO D, CSO N03, CSO Prior to D, RightChoice Series CSO N08 Series, MedAmerica (Novated Policies)

Mortality

1994 Group Annuitant Mortality (GAM) Static gender-distinct table with retrospective improvement applied to bring this table forward to 2017. These mortality rates are further adjusted based on historical mortality experience by individual/group, issue age band and duration. Tables providing these adjustment factors are provided in Section 6 of the actuarial memorandum.

The expected mortality assumptions are based on the expected assumptions for the policy forms in the below listed series, if available. An assumption based on similar forms issued by the company or other similar business issued by MedAmerica Insurance Company (including its affinity partners and acquired blocks of business) from a similar era was used when otherwise unavailable.

1980 Commissioners Standard Ordinary Basic Age Nearest Table

1965-70 US Society of Actuaries Basic Mortality Table

1983 IAM Table

1983 GAM Table

								Laps	e Rates							
		Voluntary lapse rates (efit expiry) var	y by policy du	uration and p	remium pay	ment optior	n. All policie	s are in du	ration 7 or la	ater as of th	ne valuation	date. The life	ime-pay volunta	ary lapse rate
		are shown in the table	pelow.													
		l I		-												
		Duration	Rate													
		7	2.50%													
		8	2.00%													
Current		9	1.75%													
Assumptions	All Series	10	1.50%													
Assumptions		11	1.25%													
		12+	1.25%													
											. ====					
		For the ten-pay option, and 0% lapse thereafte														
		59, and 0% lapse there		iu up at age o	o option, a re	duction of 5	0 /0 OI LITE AL	ove lapse i	ales is ass	umeu umi	age 55, a re	suuction of	7 3 70 OI IIIC 6	ibove iapse ra	ies is assumed	ioi ages 55 i
		The expected lapse rat														
		assumption based on s			company or o	other similar	business iss	ued by Med	dAmerica Ir	nsurance C	ompany (ind	cluding its a	ffinity partne	rs and acquire	ed blocks of bus	siness) from a
		similar era was used w	hen otherwise	unavailable.												
-																
				Issue	Age											
		Duration	0-64	65-70	71-80	81-84										
		1	10.00%	14.00%	18.00%	10.00%	1									
		2	8.00%	12.00%	16.00%	8.00%	1									
	CSO D, CSO N,	3	6.00%	10.00%	14.00%	6.00%										
	CSO Prior to D Series	4	6.00%	9.00%	12.00%	6.00%										
	222 10 2 001100	5	6.00%	8.00%	10.00%	6.00%	1									
		6	6.00%	7.00%	8.00%	6.00%										
		7+	6.00%	6.00%	6.00%	6.00%										
Expected		For the ten-pay premiu	m options, the	e lapse rates a	are 4% less.											
Assumptions																
							Iss	ue Age								
		Duration	0-60	61	62	63	64	65	66	67	68	69	70-84			
		1	20.00%	19.00%	18.00%	17.00%	16.00%	15.00%	14.00%	13.00%	12.00%	11.00%	10.00%			
		2	15.00%	14.00%	13.00%	12.00%	11.00%	10.00%	9.00%	8.00%	7.00%	6.00%	5.00%			
	BCBSKC, Carefirst,	3	10.00%	9.40%	8.80%	8.20%	7.60%	7.00%	6.40%	5.80%	5.20%	4.60%	4.00%			
	GHMSI, MetLife Investors,	4	8.00%	7.60%	7.20%	6.80%	6.40%	6.00%	5.60%	5.20%	4.80%	4.40%	4.00%			
	Protective Life 500,	5	6.00%	5.70%	5.40%	5.10%	4.80%	4.50%	4.20%	3.90%	3.60%	3.30%	3.00%			
	Protective Life ANC-1110 Series	6	5.00%	4.80%	4.60%	4.40%	4.20%	4.00%	3.80%	3.60%	3.40%	3.20%	3.00%			
		7	5.00%	4.80%	4.60%	4.40%	4.20%	4.00%	3.80%	3.60%	3.40%	3.20%	3.00%			
		8	5.00%	4.80%	4.60%	4.40%	4.20%	4.00%	3.80%	3.60%	3.40%	3.20%	3.00%			
		9	5.00%	4.70%	4.40%	4.10%	3.80%	3.50%	3.20%	2.90%	2.60%	2.30%	2.00%			
		10	5.00%	4.70%	4.40%	4.10%	3.80%	3.50%	3.20%	2.90%	2.60%	2.30%	2.00%			
		11+	5.00%	4.70%	4.40%	4.10%	3.80%	3.50%	3.20%	2.90%	2.60%	2.30%	2.00%			
		i i														

									Laps	se Rates
										_
						Issue A				
			ation	0-59	60-64	65-69	70-74	75-79	80+	-
			1	10.00%	11.00%	12.00%	12.00%	12.00%	12.00%	
	A construct Bullion and 186		2	7.00%	7.00%	7.00%	6.00%	4.00%	2.00%	
	American, Baltimore Life,		3	5.00%	4.00%	3.00%	3.00%	3.00% 2.00%	2.00%	
	Highmark Life Series		4 5	3.00% 3.00%	3.00% 2.00%	2.00% 2.00%	2.00% 2.00%	2.00%	2.00% 2.00%	
			5 6+	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	
			0 τ	2.0076	2.0070	2.0076	2.0076	2.0070	2.0070	
		For the 10-year p	payment o	option, a re	duction of 50°	% of these lap	se rates wa	s assumed t	for duration	ns 1 to 6, and 0% lapse thereafter.
					Issue Age					
		Dura	ation	0-64	65-74	75-84				
		1	1	8.00%	10.00%	12.00%				
			2	6.00%	8.00%	10.00%				
		3	3	5.00%	7.00%	9.00%				
			4	4.00%	6.00%	8.00%				
Expected	MedAmerica (Novated Policies)		5	4.00%	5.00%	7.00%				
Assumptions			6	4.00%	4.00%	6.00%				
· ·			7 8+	4.00%	4.00%	5.00%				
		8	5+	4.00%	4.00%	4.00%				
		For the 10-year p	payment o	option, a re	duction of 50°	% of these lap	se rates wa	s assumed t	for duration	ns 1 to 6, and 0% lapse thereafter. For the paid up at age 65 option, a reduction of 50% of these
		lapse rates was a	assumed	until age 6), and 0% lap	se thereafter.				
			_	Issue						
			ation	0-64	65-84					
				20.00%	25.00%					
			2	15.00%	20.00%					
			3	12.00%	15.00%					
	RightChoice Series		5	10.00% 8.00%	14.00% 13.00%					
			6	6.00%	12.00%					
			7	6.00%	11.00%					
			8	6.00%	10.00%					
			9	6.00%	9.00%					
		10	0+	6.00%	8.00%					
						1				

All Series
All Series
All Series

CSO Prior to D Series

CSO D Series

CSO N03, CSO N08 Series

BCBSKC, Carefirst, GHMSI, MetLife Investors,

Protective Life 500,
Protective Life ANC-1110 Series
American, Baltimore Life,

Highmark Life Series

MedAmerica (Novated Policies)

RightChoice Series

Expected Assumptions

Benefit Expiry Rates

Benefit expiry rates reflect assumed policy termination due to exhaustion of benefits on limited benefit period policies. The rates are based on the Guidelines with adjustments for historical benefit expiry experience and vary by gender, benefit period, and attained age. A table containing the benefit expiry rates is provided in Section 6 of the actuarial memorandum.

Benefit expiry was not separated from the lapse assumption.

Interest Rate

The current most-likely earnings rate assumption is 5.00%. This rate represents MedAmerica's expectation of its long-term investment earnings rate based on the average net investment earnings rate projected for MedAmerica's 2017 cash flow testing.

The maximum valuation interest rate applicable to the year of issue ranges from 4.5% to 5.5% and averages 5.1%.

The expected interest rate assumptions are based on the expected assumptions of the policy forms in the below listed series, if available. An assumption was based on similar forms issued by the company or other similar business issued by MedAmerica Insurance Company (including its affinity partners and acquired blocks of business) from a similar era was used when otherwise unavailable.

An expected earnings rate assumption of 7.0% was assumed.

The expected earnings rate assumption varies by policy duration.

Duration	Pricing Interest
1	6.50%
2	6.50%
3	6.50%
4	6.00%
5	6.00%
6+	5.50%

The expected earnings rate assumption varies by policy duration.

Duration	Pricing Interest
1	7.00%
2	7.00%
3	7.00%
4	7.00%
5	6.50%
6+	6.00%

An expected earnings rate assumption of 7.10% was assumed.

An expected earnings rate assumption of 7.50% was assumed.

An expected earnings rate assumption of 6.75% was assumed.

The expected earnings rate assumption varies by policy duration.

Duration	Pricing Interest
1	8.00%
2	8.00%
3	7.50%
4	7.00%
5+	6.50%

Current Assumptions	All Series
Expected Assumptions	All Series

Improvement

Annual improvement in the mortality and morbidity assumptions is assumed for 15 years starting in 2018. Annual mortality improvement factors vary by attained age based on the G2 improvement scale from the 2012 Individual Annuity Mortality table. Annual morbidity improvement is assumed to be 1.0%.

No mortality or morbidity improvement was assumed.

Appendix A Development and Justification of Current Assumptions

Milliman developed the current actuarial assumptions used in this filing.

The persistency and morbidity assumptions were developed using historical experience. Where actual experience had low credibility or did not exist, industry experience and actuarial judgement was also used. The experience used to develop these assumptions includes historical experience of 23 separate blocks of business that were reinsured by Employers Reinsurance Corporation (ERC), which MedAmerica Insurance Company (MedAmerica) acquired and are collectively referred to as the block of business "acquired from ERC". Additionally, MedAmerica and its affinity partners' experience is used where appropriate to develop and supplement experience. For persistency, policy termination experience through December 31, 2015 was used. For morbidity, claim experience through June 30, 2016 was used with six months of runout.

Improvement (mortality and morbidity) was developed based on individual annuitant or industry experience, along with actuarial judgment. The rate increase dependent assumptions were developed using historical experience, and actuarial judgment where experience had low credibility or did not exist.

Predictive analytics was used in the development of the morbidity assumption. The persistency assumption utilized traditional techniques and credibility measures.

The rest of this appendix provides details on the development and justification of the current assumptions.

Persistency

The assumptions for mortality and lifetime-pay voluntary lapse were developed based on detailed historical experience through December 31, 2015 for MedAmerica's organic (including affinity partners) and acquired business. For the acquired business, experience prior to acquisition was excluded as it predates MedAmerica's administration of the block. The assumptions for limited-pay voluntary lapse were developed based on experience through March 31, 2015.

The benefit expiry assumption was developed using the 2014 Milliman Long-Term Care Guidelines (Guidelines) with adjustments based on MedAmerica's actual benefit expiry experience through December 31, 2015 on its organic business.

Mortality Durational Factors for Individual Policies

Exhibit A-1a supports the individual business mortality assumption and provides the following information for all companies and products (both individual and group) combined, but separately for issue age bands (i) 75 and older, (ii) 70 to 74, (iii) 65 to 69, and (iv) 60 to 64:

- Exposure that reflects a full year of exposure for each death and the length of time a covered life is exposed
 to the risk of death during the year for each life that does not die.
- Mortality rates for actual, expected, and an additional standard table for comparison. All of these rates were brought forward to 2015 for consistency with the basis of the expected table by applying mortality improvement factors that reflect annual improvement of 0.5% for females and 1.0% for males.

Actual mortality rates equal the number of deaths divided by exposure. The number of deaths includes a scalar to capture improvement between the year of death and 2015. For example, if 10 males died in 2010, then the number of deaths (10) would be multiplied by 5 years of improvement (0.951).

2015GAM mortality rates equal 94GAM with 21 years of improvement, which results in scalars of 90% for females and 81% for males. These are the expected mortality rates to which the factors in Section 6 of the actuarial memorandum are applied.

2015IAM is equal to 2012 Individual Annuity Mortality (2012IAM) Period standard table mortality rates with 3 years of improvement (scalars of 98.5% for females and 97% for males).

- Ratios of actual and standard table mortality rates to the 2015GAM expected (A:E) mortality rates.
- Credibility percentage based on the number of deaths (with improvement scalars described above) and the credibility measure described at the end of this appendix.
- A:E ratio that is credibility weighted with the two standard table options for a complement.
- Smoothed durational factors that correspond to that shown in Section 6 of the actuarial memorandum.

Appendix A 1

Appendix A Development and Justification of Current Assumptions

We developed the smoothed factors by issue age band and duration. We started with the older issue ages to develop an ultimate factor and then worked backward to younger issue age bands, making experience adjustments for the first 20 durations. In developing these experience adjustments, we considered the A:E ratios, level of credibility, whether in the select or ultimate period, and A:E credibility-weighted ratios.

An ultimate level of 105% of 2015GAM was assumed based on the combined experience of issue ages 70 and older for attained ages older than 95 to the extent credible. For the first 20 durations, the factors were pegged for the midpoint of a quinquennial durational band and then interpolated in between to develop smoothed factors. The smoothed factors were determined such that the bands of quinquennial durations reproduced the actual experience, to the extent credible.

Theoretical adjustments are made, following the diagonal, according to the adjustments made for older issue age bands to maintain mortality relationships across attained ages. For example, we assume an 85% factor for attained age 80, which appears in duration 18 for issue age 62 and duration 23 for issue age 57 as shown in Section 6 of the actuarial memorandum; following along this diagonal the assumption is consistent.

Exhibit A-1b provides similar information as Exhibit A-1a for individual business only with issue ages under 60. For development of the mortality assumption for issue ages under 60, the experience was split between individual and group because there is a material amount of group experience under 60. Mortality can differ between individual and group business because of adverse selection associated with group underwriting.

For projection purposes, two years of additional improvement was applied to the 2015GAM mortality rates to bring them forward to 2017 using the G2 improvement scale from the 2012IAM table. The G2 scale is discussed further in the Improvement section below.

Mortality Durational Factors for Group Certificates

Exhibit A-1c supports the group business mortality assumption and provides exposure, actual and expected mortality rates, mortality A:E ratios, credibility percent, and smoothed scalars. The expected mortality rates include the individual durational mortality factors described above. The smoothed scalars were developed based on group products for issue ages under 60 only because it captures most of the group experience. We did not analyze group experience for other issue ages. These scalars are applied to the individual mortality durational factors, but capped at 105%, to produce the group mortality durational factors shown in Section 6 of the actuarial memorandum.

Lifetime-Pay Voluntary Lapse Rates

Exhibit A-2 provides total exposure, composite termination rates, expected mortality rates, derived voluntary lapse rates, credibility percent, and smoothed voluntary lapse rates by duration for lifetime-pay policies of the block acquired from ERC.

In general, the smoothed voluntary lapse rates were set in such a way that the combined duration smoothed rates were close to the derived voluntary lapse rates (see the rows at the bottom of the exhibits). The smoothed voluntary lapse rates in the early durations were chosen to reproduce actual history, to the extent possible, so that the transition from historical to projected policy persistency was smooth. In developing the ultimate voluntary lapse rate, the level of credibility of the actual voluntary lapse experience and the experience of other forms were considered, as applicable. The degree of closeness of the smoothed voluntary lapse rate compared to actual experience depends on the level of credibility.

The actual composite (mortality and voluntary lapse) termination rates were calculated by duration as follows:

Annualized Composite Termination Rate = Number of Deaths and Voluntary Lapses during the Year

Number of Lives Exposed during the Year

A death or voluntary lapse (excluding benefit expiry) was assigned to the duration in which it occurred, or the preceding duration, if the termination was on the anniversary date. Each death or voluntary lapse contributes 1.0 to the numerator and a full year to the denominator. For lives whose benefits expire or do not terminate, the number of lives exposed to termination is based on the length of time a covered life is exposed to the risk of termination due to death or voluntary lapse during the year. This calculation logic is consistent with that used in the LTC Insurance Persistency Experience reports sponsored by LIMRA International and the SOA LTC Experience Committee.

The expected mortality rate assumes the gender-distinct 2015GAM table with the durational factors shown in Section 6 of the actuarial memorandum applied by duration.

Appendix A 2

Appendix A Development and Justification of Current Assumptions

The derived voluntary lapse rate is the	n calculated according to the following formula:
Derived Voluntary Lapse Rate = 1	1 – Composite Termination Rate 1 – Expected Mortality Rate

Limited-Pay Voluntary Lapse Rates

The algorithm for the limited-pay options is similar to that expected to have been used in pricing. The smoothed lapse rates are a scalar of the lifetime-pay lapse rates. Less than 1% of the in-force policies on these blocks of business have a limited-pay option and thus the impact of these assumptions on the projections is assumed to be immaterial.

For the limited payment options, the scalars were developed from a comparison of the lifetime-pay derived lapse rates to the limited-pay option's derived lapse rates based on MedAmerica and its affinity partners' experience on all products combined. The relationships derived from this analysis were used to develop the smoothed lapse assumptions as shown in Section 6 of the actuarial memorandum.

Benefit Expiry

Benefit expiry rates reflect assumed policy lapses due to exhaustion of benefits based on the 2014 *Guidelines* with adjustments for historical benefit expiry experience and vary by attained age, gender, and benefit period. Policies with lifetime benefits do not have an expiry assumption (i.e., rate of 0%).

We compared MedAmerica's actual benefit expiry experience through December 31, 2015 to that expected by the 2014 *Guidelines*. We developed adjustment factors by attained age based on the experience of a subset of MedAmerica's organic business. Factors were developed by quinquennial attained age band and then interpolated to produce scalars for each attained age. These scalars were then applied to the benefit expiry rates developed by the 2014 *Guidelines* in order to produce the final benefit expiry assumptions shown in Section 6 of the actuarial memorandum.

Exhibit A-3 provides exposure, actual and expected benefit expiry rates, A:E ratios, credibility percent, credibility-weighted A:E ratios, and smoothed adjustment factors. The exposure used reflects a full year of exposure for each benefit expiry and the length of time a covered life is exposed to the risk of benefit expiry during the year for each life that does not expire benefits.

Morbidity

The claim costs were developed using the 2014 *Guidelines* with experience-adjustment factors based on all products of MedAmerica, its affinity partners, and any acquired business from January 1, 2004 through June 30, 2016, with runout through December 31, 2016. The experience-adjustment factors were developed using predictive analytics as described in the Predictive Analytics section below.

- Exhibit A-4a provides the adjustment factors that are to be applied to the 2014 *Guidelines* claim costs for the block acquired from ERC.
- Exhibit A-4b provides a summary of A:E experience for the block acquired from ERC.
 - Exposure [A] reflects the length of time a covered life is in force (i.e., an exact exposure basis).
 - Actual incurred claim counts [B] and dollars [C] are based on historical claim experience from inception through June 30, 2016, with runout through December 31, 2016. Actual incurred claim dollars were valued as paid claims plus claim reserves. Paid claims and claim reserves were discounted to the year of incurral.
 - o 2014 Guidelines expected incurred claims [D] are valued as the 2014 Guidelines claim costs multiplied by actual all-lives exposure. The claim costs vary by gender, attained age, policy duration, benefit period, elimination period, payment type, level of home care coverage, inflation type, and coverage type (comprehensive/facility only/home health care only). Policy design, claims adjudication, and degree of underwriting were considered in developing the claim costs.
 - Adjusted expected incurred claims [E] are calculated by applying each applicable adjustment from Exhibit A-4a to the 2014 *Guidelines* expected incurred claims [D].

Appendix A 3

Appendix A Development and Justification of Current Assumptions

- A:E ratios are calculated as actual incurred claims to the 2014 *Guidelines* expected incurred claims [F] and adjusted expected incurred claims [G]. The adjusted A:E [G] provides an indication of fit. This fit will not be perfect (i.e., ratio deviates from 1.0) because the main goal is to develop an assumption that generalizes well to new data by balancing assumption complexity and fit on the historical experience.
- Exhibit A-4c provides information similar to Exhibit A-4b, except provides the experience for all products of MedAmerica, its affinity partners, and any acquired business.

Prior to developing the experience-adjustment factors, the 2014 *Guidelines* were adjusted for an assumed level of morbidity improvement. The 2014 *Guidelines* claim costs reflect morbidity improvement such that they are as of calendar year 2014. We assume this improvement has also occurred in the actual historical experience. Therefore, a backward or forward projection of morbidity improvement was applied to the expected claim costs on a seriatim basis based on the calendar year in which a given policy's duration fell. An annual improvement level of 1.0% was used in the backward or forward projections.

For projection purposes, three years of 1.0% improvement was applied to the 2014 *Guidelines* to bring them forward to 2017.

Improvement

For projected mortality improvement, the G2 improvement scale from the 2012IAM mortality table was used. The G2 improvement scale varies by attained age and is applied beginning in the first projection year and continues for 15 projection years.

For projected morbidity improvement, a level of 1.0% is assumed for 15 years beginning January 1, 2018. This assumption is set based on the underlying morbidity improvement from the 2014 *Guidelines*. This level is also reasonable based on the Society of Actuaries (SOA) July 2016 study, *Long Term Care Morbidity Improvement Study: Estimates for the Non-Insured U.S. Elderly Population Based on the National Long Term Care Survey 1984-2004.* This study reported population annual morbidity improvement of 2.3% for unisex, 2.5% for males, and 2.1% for females. The SOA July 2016 study uses population data, so it is uncertain how well these findings will translate to an insured population. The SOA June 2011 study, *Global Mortality Improvement Experience and Projection Techniques*, suggests that an annuitant cohort has more mortality improvement over the general population, so it is possible that this could be true for morbidity as well. Based on these studies, a reasonable range for morbidity improvement is between 0.0% to 2.5% for males and 0.0% to 2.1% for females for 10 to 20 years.

Rate Increase Dependent Assumptions

At the time of a rate increase, insureds have options to elect a contingent benefit upon lapse (CBUL) or reduced benefit options (RBO). Adverse selection is assumed relative to CBUL and RBO elections. These insured behavior assumptions are provided in Section 6 of the actuarial memorandum. These assumptions are based on MedAmerica and the block acquired from ERC combined actual CBUL and RBO election rate experience to the extent it exists and is credible, and actuarial judgment, particularly at the higher rate increase magnitudes where little experience exists.

Contingent Benefit Upon Lapse Election

The assumed CBUL election rate is based on the cumulative rate increase. The assumption is applied on a seriatim basis and prorated for the requested increase needed to achieve the cumulative rate increase amounts. No CBUL elections are assumed for limited-pay policies.

Reduced Benefit Options

We assume that those electing RBO will reduce their benefits so that premiums after the increase are closer to those before the increase. We assume that the percent reduction in premium corresponds to an equivalent percent reduction in claims. We assume a RBO election rate based on the cumulative rate increase. The assumption is applied on a seriatim basis and prorated for the requested increase needed to achieve the cumulative rate increase amounts. No RBO elections are assumed for limited-pay policies.

Appendix A 4

Appendix A Development and Justification of Current Assumptions

The reduction to premium and claims then varies based on the level of the rate increase and can then be determined as follows:

Reduction to premium and claims due to the election of RBO

= 1 – (Average premium level after the rate increase with RBO election / Premium level after the full rate increase without any RBO election), where

Average premium level after the rate increase with RBO election

= weighted average premium level of those assumed to elect RBO with those assumed to accept the full rate increase

Adverse Selection

The adverse selection assumption is a function of the CBUL and RBO election rates, such that the relative increase to morbidity due to adverse selection varies by the rate increase's magnitude. The increase to morbidity due to adverse selection was developed from the following formula and actuarial judgment. We assume that at the time of the rate increase, insureds that elect a CBUL will be selective in that their relative morbidity is 25% lower than that of the remaining pool. Similarly, we assume that at the time of the rate increase, insureds that elect an RBO will be selective in that their relative morbidity is 12.5% lower than that of the remaining pool.

PoolMorb = AdvSelMorb x $(1 - CBUL - RBO) + [(1 - 25\%) \times AdvSelMorb] \times CBUL + [(1 - 12.5\%) \times AdvSelMorb] \times RBO, where$

PoolMorb = morbidity of the pool before the rate increase = 1.0

AdvSelMorb = adverse morbidity of the remaining pool after the rate increase due to selective lapses

CBUL = percentage of policies that elect CBUL RBO = percentage of policies that elect RBO

Solving the above for the adverse selection component results in the following formula for lifetime-pay policies:

Adverse Selection = $1/(1-25\% \times CBUL - 12.5\% \times RBO)$

Predictive Analytics

In developing the morbidity experience-adjustment factors, predictive analytics was employed in the form of a penalized generalized linear model (GLM).

A penalized GLM is similar to a traditional GLM. The only difference is that it adds an additional constraint that penalizes the size of the model's coefficients in order to control overfitting the model to the historical data. This penalty placed on the coefficients can be seen as a credibility lever, which controls how much weight is given to the company's actual experience. A high penalty would give no weight to the data, leaving the benchmark assumption (i.e., the 2014 *Guidelines* for morbidity) unadjusted. No penalty would give full weight to the company's actual data potentially making large adjustments to the benchmark, which could be overfitting the actual experience. When using a penalized GLM it is important to choose a penalty that gives the right amount of weight to the actual data to avoid underfitting or overfitting the experience.

A standard approach for choosing such a penalty is to use a k-fold cross-validation to test a series of penalty values. A k-fold cross-validation splits the data into k subsets and iteratively trains and tests the model independently on each subset of the data. This process gives an estimation of how well a model will generalize to new data that was not used to develop the assumption. Through the k-fold cross-validation we evaluated the impact the penalty had on the model's generalizability by testing a range of 100 penalties. We selected the penalty that minimized the k-fold cross-validation prediction error. Using this approach, we were able to determine the amount of weight to give actual experience versus the benchmark assumption through a statistically robust and automated process.

Credibility

The methodology employed to develop the persistency assumptions considers actual historical experience and its associated credibility. Credibility percentage for the persistency assumptions was determined as (Number of Events / Credibility Threshold)^{1/2}, with events defined as deaths, voluntary lapses, or benefit expiries. A credibility standard of a 90% confidence interval for the number of events with an error of plus or minus 7.5% was chosen. Based on these parameters, 481 events is the criterion for full credibility.

Appendix A 5

Exhibit A-1a Actual-to-Expected (A:E) Mortality Experience through December 31, 2015 All Products

			Mortality Rate		Ratios to	2015GAM		A:E Credibility-	Weighted with:	Smoothed
		Actual	2015GAM	2015IAM	Actual	2015IAM	Credibility	2015GAM	2015IAM	Durational
Duration	Exposure	(A)	(E)	(X)	(A:E)	(X:E)	Percent	(E:E=1.00)	(X:E)	Factors
		, ,	` ,	. ,	, ,	, ,	•	,	, , ,	
					Issue Age 7					
1-5	24,998	1.8%	4.4%	3.1%	0.40	0.70	95%	0.43	0.41	0.41
6-10	20,553	5.0%	7.0%	5.5%	0.71	0.78	100%	0.71	0.71	0.71
11-15	11,268	10.1%	10.5%	8.8%	0.96	0.84	100%	0.96	0.96	0.96
16-20	3,330	16.3%	16.1%	14.2%	1.02	0.88	100%	1.02	1.02	1.04
21-25	415	25.3%	22.2%	20.6%	1.14	0.93	47%	1.07	1.03	1.05
26+	25	7.8%	32.1%	30.8%	0.24	0.96	6%	0.95	0.91	1.05
21+	440	24.3%	22.8%	21.2%	1.07	0.93	47%	1.03	0.99	1.05
All	60,589	5.4%	7.2%	5.7%	0.75	0.79	100%	0.75	0.75	0.75
					Issue Ages 70					
1-5	39,706	0.9%	2.2%	1.4%	0.41	0.64	87%	0.49	0.45	0.40
6-10	38,186	2.4%	3.7%	2.5%	0.66	0.67	100%	0.66	0.66	0.65
11-15	27,286	4.9%	6.0%	4.4%	0.83	0.74	100%	0.83	0.83	0.84
16-20	10,157	9.1%	9.4%	7.7%	0.98	0.82	100%	0.98	0.98	0.98
21-25	2,029	14.6%	14.3%	12.3%	1.02	0.86	78%	1.02	0.99	1.04
26+	138	25.8%	20.4%	18.6%	1.27	0.91	27%	1.07	1.01	1.05
21+	2,167	15.3%	14.7%	12.7%	1.04	0.87	83%	1.03	1.01	1.04
All	117,501	3.3%	4.4%	3.2%	0.75	0.73	100%	0.75	0.75	0.75
					Issue Ages 65	- 69				
1-5	67,094	0.6%	1.4%	0.9%	0.42	0.65	90%	0.48	0.44	0.40
6-10	65,409	1.4%	2.2%	1.4%	0.64	0.64	100%	0.64	0.64	0.65
11-15	50,103	2.9%	3.7%	2.4%	0.78	0.66	100%	0.78	0.78	0.79
16-20	23,101	5.3%	5.9%	4.3%	0.90	0.74	100%	0.90	0.90	0.90
21-25	6,829	9.5%	9.3%	7.6%	1.03	0.82	100%	1.03	1.03	0.99
26+	533	13.8%	13.6%	11.6%	1.01	0.86	39%	1.01	0.92	1.04
21+	7,362	9.8%	9.6%	7.9%	1.03	0.82	100%	1.03	1.03	0.99
All	213,069	2.2%	3.0%	2.0%	0.75	0.69	100%	0.75	0.75	0.74
-									•	
					Issue Ages 60					
1-5	93,335	0.3%	0.9%	0.6%	0.41	0.72	82%	0.51	0.46	0.39
6-10	85,284	0.8%	1.4%	0.9%	0.57	0.65	100%	0.57	0.57	0.59
11-15	58,636	1.5%	2.3%	1.5%	0.68	0.65	100%	0.68	0.68	0.67
16-20	27,386	3.2%	3.8%	2.5%	0.85	0.67	100%	0.85	0.85	0.83
21-25	9,435	5.5%	6.1%	4.5%	0.90	0.75	100%	0.90	0.90	0.90
26+	782	9.5%	9.1%	7.5%	1.05	0.82	39%	1.02	0.91	0.97
21+	10,217	5.8%	6.3%	4.8%	0.92	0.76	100%	0.92	0.92	0.91
All	274,857	1.2%	1.8%	1.2%	0.68	0.68	100%	0.68	0.68	0.67

Exhibit A-1b Actual-to-Expected (A:E) Mortality Experience through December 31, 2015 Individual Products

			Mortality Rate		Ratios to	2015GAM		A:E Credibility-	Weighted with:	Smoothed
		Actual	2015GAM	2015IAM	Actual	2015IAM	Credibility	2015GAM	2015IAM	Durational
Duration	Exposure	(A)	(E)	(X)	(A:E)	(X:E)	Percent	(E:E=1.00)	(X:E)	Factors
						•				
					Issue Age <					
1-5	213,822	0.1%	0.3%	0.2%	0.39	0.86	66%	0.59	0.55	0.38
6-10	134,800	0.3%	0.5%	0.4%	0.54	0.77	88%	0.59	0.56	0.54
11-15	57,646	0.6%	0.9%	0.7%	0.61	0.69	83%	0.67	0.62	0.60
16-20	24,577	1.1%	1.5%	1.0%	0.70	0.67	74%	0.78	0.69	0.70
21-25	9,193	1.7%	2.4%	1.6%	0.70	0.67	57%	0.83	0.68	0.79
26+	759	2.9%	4.4%	3.1%	0.65	0.72	21%	0.93	0.70	0.87
21+	9,952	1.8%	2.6%	1.7%	0.69	0.68	61%	0.81	0.68	0.80
All	440,797	0.3%	0.6%	0.4%	0.56	0.75	100%	0.56	0.56	0.57

Exhibit A-1c Actual-to-Expected (A:E) Mortality Experience through December 31, 2015 Group Products

		Actual	Expected			
		Mortality	Mortality	Mortality	Credibility	Smoothed
Duration	Exposure	Rate	Rate ^[1]	A:E	Percent	Scalars

			Issue Age <6	60		
1-5	120,598	0.2%	0.1%	2.00	65%	2.00
6-10	109,681	0.3%	0.2%	1.48	85%	1.50
11-15	71,689	0.5%	0.4%	1.20	83%	1.20
16-20	25,556	0.7%	0.6%	1.15	59%	1.15
21-25	11,926	0.8%	0.9%	0.93	45%	1.10
26-30	305	1.3%	1.2%	1.06	9%	1.05
31+	0	N/A	N/A	N/A	0%	1.00

^[1] Includes the durational adjustment factors developed for individual business.

Exhibit A-2
Derived Lifetime-Pay Voluntary Lapse Experience through December 31, 2015
Business Acquired from ERC
Lifetime-Pay Policies

		Composite	Expected	Derived		Smoothed
		Termination	Mortality	Lapse	Credibility	Lapse
Duration	Exposure	Rates	Rates	Rates	Percent	Rates
7	5,530	3.2%	0.9%	2.2%	48%	2.50%
8	5,768	2.9%	1.1%	1.7%	48%	2.00%
9	6,227	3.0%	1.2%	1.7%	46%	1.75%
10	6,225	3.1%	1.4%	1.6%	48%	1.50%
11	6,100	2.9%	1.6%	1.2%	40%	1.25%
12	5,891	3.2%	1.9%	1.2%	41%	1.25%
13	5,639	3.0%	2.3%	0.6%	29%	1.25%
14	5,330	2.8%	2.8%	-0.1%	29%	1.25%
15	5,329	4.7%	3.4%	1.1%	36%	1.25%
16	5,390	5.1%	4.0%	1.0%	42%	1.25%
17	5,170	6.1%	4.5%	1.5%	43%	1.25%
18	4,521	6.0%	4.9%	0.9%	31%	1.25%
19	3,823	7.6%	5.3%	2.1%	34%	1.25%
20	3,166	7.0%	5.7%	1.2%	30%	1.25%
21	2,692	7.7%	6.0%	1.5%	31%	1.25%
22	2,080	9.8%	6.7%	3.0%	28%	1.25%
23	1,702	8.9%	7.1%	1.7%	28%	1.25%
24	1,409	9.5%	7.7%	1.8%	22%	1.25%
25	1,112	10.6%	8.2%	2.4%	19%	1.25%
26	781	10.4%	9.0%	1.4%	16%	1.25%
27	520	9.8%	9.9%	-0.2%	8%	1.25%
28	259	12.7%	11.1%	1.8%	8%	1.25%
29	78	5.1%	12.0%	-7.8%	5%	1.25%
30	8	24.0%	13.6%	12.0%	5%	1.25%
31	1	0.0%	19.1%	-23.7%	0%	1.25%
32	1	100.0%	20.8%	99.4%	0%	1.25%
7-9	17,526	3.0%	1.1%	1.8%	82%	2.07%
7+	84,753	4.7%	3.3%	1.3%	100%	1.44%
8+	79,223	4.8%	3.5%	1.3%	100%	1.36%
9+	73,454	5.0%	3.6%	1.3%	100%	1.31%
10+	67,227	5.2%	3.9%	1.2%	100%	1.27%

Exhibit A-3
Actual-to-Expected (A:E) Benefit Expiration Experience through December 31, 2015
Subset of MedAmerica Organic Business

		Actual	Expected			Credibility-	Smoothed
Attained		Expiry	Expiry	Expiry	Credibility	Weighted	Adjustment
Age Band	Exposure	Rate	Rate	A:E	Percent	A:E	Factors
<80	528,089	0.03%	0.04%	0.70	56%	0.83	0.85
80-84	50,683	0.52%	0.41%	1.27	74%	1.20	1.25
85-89	22,568	1.52%	1.04%	1.46	85%	1.39	1.45
90+	6,638	4.43%	2.47%	1.79	78%	1.62	1.65
All	607,979	0.17%	0.14%	1.28	100%	1.28	1.28

Exhibit A-4a MedAmerica and Acquired Business Morbidity Adjustment Factors **Business Acquired from ERC**

	Tax Status Adju	ustment Factors
	Non-Tax-	Tax-
Duration	Qualified (NTQ)	Qualified (TQ)
1	1.00	0.95
2	1.00	0.89
3	1.00	0.83
4	0.98	0.78
5	0.96	0.78
6	0.91	0.79
7	0.85	0.84
8	0.79	0.89
9	0.76	0.99
10	0.75	0.97
11	0.78	1.00
12	0.80	1.00
13	0.85	1.01
14	0.90	0.97
15	0.99	0.99
16	0.99	0.99
17	1.04	1.00
18	1.05	0.99
19	1.05	1.00
20+	0.99	1.00

	Tax 9	Status
Attained		nt Factors
Age	NTQ	TQ
<55	0.99	1.06
55	0.99	1.06
I		1
56	0.99	1.06
57	1.00	1.15
58	1.01	1.21
59	1.02	1.27
60	1.05	1.23
61	1.04	1.23
62	1.01	1.10
63	0.98	1.01
64	0.96	0.94
65	0.95	0.88
66	0.97	0.86
67	1.01	0.87
68	1.07	0.89
69	1.14	0.92
70	1.14	0.93
71	1.13	0.92
72	1.05	0.93
73	0.97	0.94
74	0.87	0.97
75	0.87	1.02
76	0.86	1.05
77	0.88	1.04
78	0.88	1.00
79	0.92	0.94
80	0.95	0.88
81	0.94	0.84
82	0.97	0.84
83	0.93	0.85
84	0.93	0.88
85	0.90	0.91
86	0.89	0.94
87	0.85	0.97
88	0.86	0.97
89	0.85	0.97
90	0.80	0.99
91	0.81	0.98
92	0.84	0.99
93	0.85	1.00
94	0.86	1.02
95	0.90	1.01
96	0.93	1.01
97	0.94	1.01
98	0.94	1.01
99	0.96	1.01
100	0.96	1.00
101+	0.95	1.00

Attained		tus Adjustmen ⁄idual	t Factors Group	-	Attained	Adjustma	nt Factors
H	NTQ	TQ	All	-		Individual	Group
Age <55	0.99	0.94		1	Age <55		
55	0.99	0.94	1.07 1.07	-	55	0.93 0.93	1.01 1.01
56	0.99	0.94	1.07		56 57	0.93	1.01
57	0.94	0.92	1.12		57	0.89	1.06
58	0.88	0.92	1.11		58	0.86	1.09
59	0.90	0.88	1.11	-	59	0.83	1.09
60	0.91	0.91	1.04		60	0.85	1.06
61	0.91	0.90	1.02		61	0.83	1.01
62	0.96	0.87	0.92		62	0.82	0.92
63	1.05	0.81	0.90		63	0.83	0.83
64	0.96	0.81	0.90	4	64	0.84	0.80
65	0.89	0.85	0.91		65	0.84	0.80
66	0.89	0.82	0.93		66	0.81	0.83
67	0.90	0.87	1.01		67	0.81	0.88
68	0.83	0.95	1.07		68	0.78	0.96
69	0.88	1.01	1.04		69	0.77	0.99
70	0.94	0.99	1.01		70	0.80	1.01
71	0.98	1.03	0.99		71	0.93	1.02
72	1.00	1.05	0.96		72	0.98	0.99
73	1.06	1.05	0.96		73	1.08	1.00
74	1.11	1.04	0.97		74	1.14	0.99
75	1.14	1.04	0.93		75	1.13	0.97
76	1.10	1.08	0.93		76	1.02	0.98
77	1.08	1.07	0.88		77	1.06	1.01
78	1.07	1.09	0.82		78	1.05	0.97
79	1.06	1.12	0.77		79	1.07	0.93
80	1.03	1.19	0.79		80	1.10	0.92
81	1.06	1.15	0.78		81	1.14	0.87
82	1.08	1.14	0.82		82	1.08	0.86
83	1.14	1.14	0.87		83	1.09	0.88
84	1.08	1.10	0.94		84	1.05	0.94
85	1.10	1.07	0.95	1	85	1.07	0.96
86	1.09	1.09	0.98		86	1.08	1.01
87	1.10	1.17	0.98		87	1.14	1.03
88	1.06	1.18	0.97		88	1.17	1.04
89	1.09	1.22	0.97		89	1.17	1.04
90	1.06	1.24	0.96	1	90	1.16	1.03
91	1.04	1.24	0.97		91	1.16	1.02
92	1.02	1.15	0.98		92	1.10	1.01
93	1.02	1.11	0.99		93	1.08	1.02
94	1.01	1.06	0.99		94	1.09	1.01
95	1.03	1.04	0.99	1 .	95	1.10	1.00
96	1.02	1.01	0.98		96	1.09	0.99
97	1.03	1.01	0.98		97	1.09	0.99
98	1.00	1.01	0.97		98	1.07	0.98
99	1.00	1.01	0.97		99	1.05	0.98
100	1.00	1.02	0.98	1 .	100	1.03	0.98
101+	1.00	1.02	0.98		101+	1.03	0.99

Coverage Type	Adjustment Factor
Comprehensive	0.90
Nursing Home Only	1.03
Home Care Only	1.10

Exhibit A-4b

MedAmerica and Acquired Business

Actual-to-Expected (A:E) Morbidity Experience through June 30, 2016 with Claim Runout

Business Acquired from ERC

Policy or		Actual Incur	red Claims	Expected Inc	urred Claims	A:E Incurre	ed Claims
Policyowner	Exposure	Count	Dollars	2014 Guidelines	New	2014 Guidelines	New
Characteristic	[A]	[B]	[C]	[D]	[E]	[F] = [C] / [D]	[G] = [C] / [E]
Group / Individual	-	-					
Individual	74,701	1,836	100,554,123	112,027,310	108,284,569	0.90	0.93
Group	44,656	180	16,867,667	18,397,760	13,860,601	0.92	1.22
Payment-Type / Tax Status (TQ	= Tax-Qualified, NTC	Q = Non-Tax-Qualifi	ed)				
Cash / TQ	-	-	-	-	-	-	-
Reimbursement / NTQ	48,718	1,625	83,105,602	91,206,762	86,274,022	0.91	0.96
Reimbursement / TQ	70,639	391	34,316,188	39,218,308	35,871,149	0.88	0.96
Coverage Type							
Comprehensive	95,676	1,401	86,686,914	96,239,971	85,649,308	0.90	1.01
Nursing Home Only	23,670	614	30,707,126	34,181,720	36,491,982	0.90	0.84
Home Care Only	12	1	27,750	3,379	3,880	8.21	7.15
Attained Age	-						
< 60	28,992	24	3,135,199	2,744,953	2,644,674	1.14	1.19
60 - 69	30,349	59	5,210,038	8,389,296	5,679,377	0.62	0.92
70 - 79	30,879	349	26,856,347	29,713,733	27,036,380	0.90	0.99
80 - 89	24,812	1,128	65,382,231	69,745,547	68,458,567	0.94	0.96
90 +	4,326	456	16,837,976	19,831,542	18,326,174	0.85	0.92
Policy Duration							
< 7	23,303	42	2,547,810	5,124,207	3,833,438	0.50	0.66
7 - 10	27,908	121	9,829,141	14,683,779	12,308,504	0.67	0.80
11 - 15	34,080	434	30,923,950	34,082,601	31,167,276	0.91	0.99
16 - 20	23,060	818	45,707,104	44,004,951	44,094,675	1.04	1.04
21 +	11,007	601	28,413,786	32,529,532	30,741,278	0.87	0.92
Total	119,358	2,016	117,421,790	130,425,070	122,145,171	0.90	0.96

Exhibit A-4c
MedAmerica, Affinity Partners, and Acquired Business
Actual-to-Expected (A:E) Morbidity Experience through June 30, 2016 with Claim Runout
All Products

Policy or		Actual Incur	red Claims	Expected Inc	urred Claims	A:E Incurre	ed Claims
Policyowner	Exposure	Count	Dollars	2014 Guidelines	New	2014 Guidelines	New
Characteristic	[A]	[B]	[C]	[D]	[E]	[F] = [C] / [D]	[G] = [C] / [E]
Group / Individual							
Individual	912,916	9,926	800,367,697	733,049,215	794,361,129	1.09	1.01
Group	346,699	1,374	130,339,904	156,675,596	133,888,114	0.83	0.97
Payment-Type / Tax Status (TQ	= Tax-Qualified, NTO	Q = Non-Tax-Qualifi	ed)				
Cash / TQ	343,731	558	62,039,510	57,638,053	59,620,193	1.08	1.04
Reimbursement / NTQ	300,053	6,653	510,365,552	479,343,318	507,745,230	1.06	1.01
Reimbursement / TQ	615,831	4,089	358,302,538	352,743,439	360,883,820	1.02	0.99
Coverage Type							
Comprehensive	1,136,716	8,789	756,597,258	749,849,298	758,592,612	1.01	1.00
Nursing Home Only	106,185	2,145	154,205,174	127,829,789	153,061,713	1.21	1.01
Home Care Only	16,715	366	19,905,169	12,045,724	16,594,918	1.65	1.20
Attained Age							
< 60	453,624	244	33,805,437	30,149,268	30,328,735	1.12	1.11
60 - 69	360,462	666	78,589,161	88,054,403	75,788,341	0.89	1.04
70 - 79	291,092	2,748	262,147,876	268,144,812	267,494,038	0.98	0.98
80 - 89	138,826	5,979	465,876,836	417,634,186	464,847,833	1.12	1.00
90 +	15,611	1,663	90,288,290	85,742,142	89,790,297	1.05	1.01
Policy Duration							
< 7	497,039	823	75,787,355	82,648,988	79,201,077	0.92	0.96
7 - 10	307,411	1,867	174,015,180	164,578,241	170,058,801	1.06	1.02
11 - 15	278,526	3,765	317,411,016	297,015,693	316,181,994	1.07	1.00
16 - 20	129,643	3,188	245,115,546	230,142,856	242,291,028	1.07	1.01
21 +	46,996	1,657	118,378,503	115,339,033	120,516,343	1.03	0.98
Total	1,259,615	11,300	930,707,601	889,724,811	928,249,243	1.05	1.00

Appendix B Justification for and Development of the Requested Rate Increase

This appendix provides details on the development of the current rate increase requests as well as providing demonstrations of how the requested rate increases are not recouping past losses.

Rate Increase Development

The requested rate increases were determined such that the block would break even with margin in the future for the subset of policies with a lifetime-pay option. That is, the present value of future income (premiums, investment income, and release in policy reserves) will cover the cost of future disbursements (benefits and expenses) to prevent future losses and ensure that funds are available to pay policyholder benefits. It is important to note that as this methodology is a prospective calculation, the historical experience was not considered when developing the requested rate increase. The company is bearing the burden of the historical losses on this business.

The break-even rate increases were analyzed by inflation protection option to better align the rate increase with the adverse experience. Given the size of the increases justified from the methodology, the company decided to cap the requested rate increases at the amount needed to achieve cumulative increases of 140% for policies with no inflation and 299% for policies with inflation.

Table B-1 below provides the cumulative rate increases needed to break even with margin in the future as well as the cumulative rate increases that are currently being achieved with the requested increases by inflation protection option.

Table B-1
Comparison of Break-Even Cumulative Increase and Requested Increase

Inflation Protection Option	Break-Even Cumulative Rate Increase ^[1]	Requested Cumulative Rate Increase ^[1]		
AII ^[2]	493%	213%		
No Inflation	330	140		
Auto Inflation	685	299		

^[1] Captures only the rate increases that have been or are being filed with the department of insurance after MedAmerica had acquired the business.

While the company does not currently anticipate additional rate increases, it will continue to monitor the business and reserves the right to request additional rate increases in the future.

Demonstrations Requested Increase does not Recoup Past Losses

A number of methods exist to quantify or demonstrate whether an increase may be recouping past losses and offer the following for consideration.

Capped Historical Incurred Claims

The 2014 Long-Term Care Model Regulation (Model Regulation) contemplates recouping past losses in Section 20.1.C for newly issued policies. Specifically, recouping past losses is limited by not allowing past actual claims in excess of expected claims by calendar year in the minimum loss ratio test (Section 20.1.C(2)).

While Section 20.1.C is not applicable to these policies, to demonstrate that the rate increase is not recouping past losses we capped actual historical claims by those expected in pricing by calendar year in demonstrating compliance with the applicable minimum loss ratio requirements for these policies. Expected claims are calculated as earned premium multiplied by expected loss ratio for each calendar year.

Tables B-2 and B-3 reflect the capped historical incurred claims and demonstrate compliance with the applicable minimum loss ratio requirements for the pre- and post-rate stability regulation (Model Regulation Sections 19 and 20), respectively. Tables B-2 and B-3 provide similar information as that in Section 15 of the actuarial memorandum for all companies combined, except for capping historical incurred claims at that expected.

Appendix B 1

^[2] Average as of December 31, 2017 and excludes policies assumed to be paid up prior to implementation of the requested rate increase.

Appendix B Justification for and Development of the Requested Rate Increase

Table B-2
Nationwide Lifetime Loss Ratios with Capped Historical Incurred Claims at the Maximum Valuation Interest Rate

Cohort	Before Increase	After Increase						
All	75%	72%						
Individual	75	72						
Group	98	70						
No Inflation	70	69						
Auto Inflation	110	87						

Table B-3
Nationwide Alternative 58%/85% Test with Capped Historical Incurred Claims

Cohort	Alternative to 58% Loss Ratio ^[1]	Item 5 ^[2]	Item 7 ^[3]	Result ^[4]
All	65%	\$345	\$390	Pass
Individual	64	335	378	Pass
Group	66	10	12	Pass
No Inflation	65	298	320	Pass
Auto Inflation	62	47	67	Pass

- [1] Represents the greater of 58% and the expected lifetime loss ratio.
- [2] Item 5 is the Lifetime Earned Premium (in millions) Times Prescribed Factor.
- [3] Item 7 is Lifetime Incurred Claims with Rate Increase (in millions). The historical incurred claims by calendar year reflect the lesser of actual and expected pricing claims. The future projected incurred claims were increased by 15% to reflect assumptions with moderately adverse experience.
- [4] Test of whether Item 7 is not less than Item 5.

HATF Discussion and Lifetime Premium Equivalence

One approach that was considered by the NAIC Health Actuarial Task Force (HATF) during discussions for the development of the Model regulation was that past losses should be defined as past premium inadequacies given current, updated information. A company would demonstrate this approach by restating premiums to the proposed rate level from inception and demonstrating compliance with minimum loss ratio tests.

This approach was determined by HATF to not be a realistic method to define past losses because in reality there is no opportunity for the company to have perfect knowledge from policy inception and this approach greatly expands the risk on the product. Ultimately, HATF settled on the approach that past losses should be defined as any excess of actual past claims over expected claims, which lead to the approach outlined in Section 20.1.C of the Model Regulation and described above. For additional background on HATF's review of methods of defining past losses please see the article 'Recouping Past LTC Losses' in the April 2017 issue of the Society of Actuaries Long-Term Care Section newsletter, Long-Term Care News.

While it is not appropriate to use this restrictive method of restating premiums to the proposed rate level from inception to determine the rate increase, we can use it to confirm that current policyholders are not paying more over their lifetime than what they would have if the company had perfect knowledge.

With perfect knowledge, the company would have charged 36% higher rates from issue to reproduce the original pricing loss ratio of 65%. To avoid recouping premium on past policies that will not receive the rate increase, we compare lifetime premiums on a present value basis for the subset of policies that are in-force with lifetime-pay. These policies would have paid \$69 million in the history and \$80 million over the lifetime if the company had perfect knowledge and charged 36% higher premiums from issue. In contrast, the actual premium paid by these policies has been \$53 million in the history and is projected to be \$78 million over the lifetime including the requested rate increase. Therefore, these in-force policies will pay less over their lifetime than what they would have paid if the company had perfect knowledge at issue.

Table B-4 below provides a summary of the present value of lifetime premiums under the scenario discussed above by inflation protection option.

Appendix B 2

Appendix B Justification for and Development of the Requested Rate Increase

Table B-4 Lifetime Premium Equivalence In-force Policies with Lifetime-Pay

Inflation	Original	Increase	Present Value of Lifetime Premium (Millions) with:			
Protection Option	Pricing Loss Ratios	Needed from Inception	Perfect Knowledge at Issue ^[1]	Actual History and Requested Increase in Future		
All	65%	36%	\$80	\$78		
No Inflation	65	27	41	38		
Auto Inflation	62	96	51	40		

^[1] The increase needed from inception is calculated in regards to all lives while the present value of premium is calculated based on life-pay policies currently in force. The difference results in the sum of no inflation and auto inflation not tying to the total for the all inflation option.

Appendix B 3

Baltimore Life Insurance Company

Address: 10075 Red Run Boulevard, Owings Mills, Maryland 21117

Supplement to the Actuarial Memorandum

June 19, 2019

Product Number
Baltimore Life Series
Comprehensive Form 5812S(PA)

The above-listed form(s) was acquired by MedAmerica Insurance Company (MedAmerica) through a reinsurance agreement with the Employers Reinsurance Corporation (ERC). MedAmerica manages the above-listed form(s) with other similar blocks of business it acquired and refers to the business as the "acquired from ERC" block. Certain policies within the block novated to MedAmerica paper. MedAmerica administers and has 50%-100% of the risk on the entire block acquired from ERC.

Four filings with the business acquired from ERC are concurrently being submitted in this jurisdiction for (1) Central States Health and Life Company of Omaha (CSO), (2) Highmark Life Insurance Company (Highmark), (3) Baltimore Life Insurance Company (Baltimore Life), and (4) MedAmerica on policies that novated to its paper.

This supplement captures the nationwide experience of the above-listed policy form(s) and is pooled with certain business acquired from ERC. Pennsylvania-specific experience is not considered fully credible, but is being provided as required.

A. Purpose of Supplement

This supplement has been prepared for the purpose of demonstrating the compliance of the requested rate increase with Chapter 18 Section 3803(c) and (e), and Reg. 89.83 of the Insurance Regulations for the state of Pennsylvania as well as provide items generally requested by the Department. It may not be appropriate for other purposes.

B. Demonstration of Compliance with Chapter 18 Section 3803

(c) and (e): We believe that we comply with these subsections of the regulation by submitting these rates before they are being used.

C. Demonstration of Compliance with Reg. 89.83

- 89.83 (a): This subsection requires no action.
- 89.83 (b): This subsection is not applicable since this filing is not for rates for a new policy form.
- 89.83 (c): Revision of Current Rates
- (1): For policies issued prior to September 16, 2002, the effective date of rate stability in Pennsylvania, the minimum loss ratio requirement is 60%, as specified in Reg. 89a.117.(b). For policies issued on or after September 16, 2002, the loss ratio requirements are specified in Reg. 89a.118.(c)(2), (i.e., the 58%/85% test). Demonstration of satisfaction of these requirements is discussed in Section 15 of the enclosed actuarial memorandum.

As of December 31, 2017, 19 of the 302 policies that are in force and subject to the requested rate increase in Pennsylvania were issued on or after September 16, 2002 (approximately 6%). However, because the company manages this block of business as a whole, this rate increase filing complies with both sets of requirements for all of the policies, regardless of issue date.

- (2): Section 3 of the actuarial memorandum provides a description of benefits. Copies of the affected policy form(s) may be provided upon request, if available.
- (2)(i): The primary reason why these forms are in need of a premium rate increase is due to emerging experience running more adverse than expected in pricing.

The company is requesting a premium rate increase that varies by inflation protection option to achieve the cumulative rate increases as shown in Section 2 of the enclosed actuarial memorandum. The company is seeking this current rate increase request to help alleviate the adverse performance on this

Baltimore Life Insurance Company

Address: 10075 Red Run Boulevard, Owings Mills, Maryland 21117

Supplement to the Actuarial Memorandum

June 19, 2019

block of business. The cumulative rate increase levels were determined to vary by inflation protection option to better align the rate increase with the adverse experience. The table in Section 2 of the enclosed actuarial memorandum provides the average prior, requested, and cumulative increase by inflation protection option based on the nationwide distribution. The enclosed cover letter provides similar information on a Pennsylvania-specific distribution.

The current rate schedules along with the proposed rate schedules are enclosed with this filing in the format of a seriatim listing of affected policies as described in Section 2 of the enclosed actuarial memorandum. Please note that the actual rates implemented may vary slightly from those in the enclosed seriatim listing due to implementation rounding algorithms.

Exhibit I of the enclosed actuarial memorandum provides nationwide earned premium and incurred claim actual and projected experience using current assumptions, as described in Section 6 of the actuarial memorandum. Attachment 1 to this supplement provides nationwide written premium and paid claim actual and projected experience using current assumptions. Values in Exhibit I and Attachment 1 are shown both before and after the requested rate increase. The interest rate used in Exhibit I and Attachment 1 to accumulate and discount values is the maximum valuation interest rate for contract reserves applicable for the year of issue (which ranges from 4.5% to 5.5%, and averages 5.1%).

Attachments 2 and 3 to this supplement provide similar information as Exhibit I and Attachment 1 respectively, except provide Pennsylvania-specific experience.

(2)(ii)(A): There have been no previous rate revisions on the above-listed form(s) in Pennsylvania since MedAmerica acquired the business.

(2)(ii)(B): Table 1 shows the commission scales by duration for the policy forms subject to the requested rate increase in Pennsylvania. The commission scale reflects the pricing commission scales utilized by MedAmerica in its cash flow testing. The final duration's commission scale is the company's current expected commission rate.

Table 1
Commission Percentages by Duration

		Commissions by Duration	
Company	Policy Form	1-10	11+
Baltimore Life	5812S(PA)	12%	2%
CSO	N03 PA N05 PA	20	2
Highmark	TGGC8010(3/94)PA TGGC8010(5/95)PA	27	2
MedAmerica (Novated Polices)	LTC1200 (8/2000) PA	20	2

The actual commission scales will differ slightly from those that appear in Table 1 as MedAmerica adjusts renewal commission rates so that the total commissions paid before and after any increase in premium are similar (i.e., commissions are not paid on the increased premium).

(2)(ii)(C)(I): Premiums earned and written since inception for nationwide experience can be found in Exhibit I of the actuarial memorandum and Attachment 1 to this supplement, respectively. Premiums earned and written since inception for Pennsylvania-specific experience can be found in Attachments 2 and 3, respectively. Attachment 4 to this supplement provides reserve balances and the calculation basis for both nationwide and Pennsylvania-specific experience.

(2)(ii)(C)(II): Attachment 4 to this supplement provides a breakdown of historical incurred claims and active life reserve balance, including a description of the calculation basis, for both nationwide and Pennsylvania-specific experience.

Baltimore Life Insurance Company

Address: 10075 Red Run Boulevard, Owings Mills, Maryland 21117

Supplement to the Actuarial Memorandum

June 19, 2019

Attachment 5 to this supplement provides actual and projected experience on a durational basis using current assumptions. Included are policy year earned premiums, incurred claims, durational loss ratios, end of year lives, and cumulative loss ratios with interest. Values in Attachment 5 are shown both before and after the requested rate increase. The number of durations shown was chosen to capture the majority of the durations underlying Exhibit I. Similar to Exhibit I and Attachments 1 through 3, the values used to calculate the cumulative loss ratios are accumulated and discounted at the maximum valuation interest rate.

Attachment 6 to this supplement provides similar information to Attachment 5, except provides Pennsylvania-specific experience.

(2)(ii)(D): We believe that we have provided information sufficient to support the rate increase requested in this filing.

(2)(iii): We understand that data used in this rate increase filing is in agreement with those used in the annual statement filed with the department. However, historical experience prior to 2004 was estimated as described in Section 15 of the enclosed actuarial memorandum.

89.83 (d): We believe the proposed rate tables provided with this filing comply with this subsection.

D. Demonstration of Compliance with Generally Requested Information

Attachment 7 to this letter provides a table showing the status of the rate increase filings, along with the cumulative rate increase implemented to date. The status is shown for each jurisdiction in which there is business in force as of December 31, 2017 on these and similar policy forms of the business acquired from ERC.

As part of this rate increase process, the same increase has been or is expected to be requested in most jurisdictions except where limited by regulatory requirements or the limited amount of in-force business.

E. Microsoft Excel spreadsheet containing all numerical data

An Excel workbook containing the values shown in Exhibits I and II of the actuarial memorandum and Attachments 1 through 7 of this supplement is enclosed with this filing, as required.

F. Description of Attachments and Enclosures

- Attachment 1: Nationwide Actual and Projected Written Premium and Paid Claims
- Attachment 2: Pennsylvania-Specific Actual and Projected Experience
- Attachment 3: Pennsylvania-Specific Actual and Projected Written Premium and Paid Claims
- Attachment 4: Nationwide and Pennsylvania-Specific Claims and Reserves Balance
- Attachment 5: Nationwide Actual and Projected Experience by Policy Year
- Attachment 6: Pennsylvania-Specific Actual and Projected Experience by Policy Year
- Attachment 7: Status Listing

Enclosure: Exhibits and Attachments in Excel

Attachment 1-a

Business Acquired from ERC

Written Premium and Paid Claim Experience and Projections by Calendar Year Nationwide Experience Before Requested Rate Increase All Policies

		Actual or Pi	rojected Experien	ce using Current	
			Without Interest		Cumulative Loss
	Calendar	Written	Paid	Loss	Ratio w/ Max.
	Year	Premium	Claims	Ratio	Val. Interest
	Prior to 1990*	22,204,897	3,604,031	16%	16%
	1990-1994*	49,026,766		53%	39%
	1995-1999*	33,350,613		86%	51%
	2000*	5,790,092		87%	52%
	2001*	5,735,776		85%	54%
	2002*	5,833,638	4,788,223	82%	54%
	2003*	5,536,421	4,753,542	86%	55%
	2004	4,747,261	2,836,153	60%	56%
Historical	2005	4,379,669	4,326,888	99%	56%
Experience	2006	4,011,006	5,057,892	126%	57%
	2007	3,709,397	4,711,595	127%	58%
	2008	3,447,243		146%	59%
	2009	3,171,942		149%	60%
	2010	3,259,534		126%	61%
	2011	3,088,325		126%	62%
	2012	2,862,195		136%	62%
	2013	2,652,869	, ,	154%	63%
	2014	2,455,077		182%	63%
	2015	2,277,583		197%	64%
				254%	65%
	2016	2,087,563			
	2017	1,873,135		317% 287%	66%
	2018	1,698,299			67%
	2019	1,544,497		322%	67%
	2020	1,400,082		351%	68%
	2021	1,265,182		398%	69%
	2022	1,139,680		447%	69%
	2023	1,023,482		498%	70%
	2024	915,326		552%	71%
	2025	816,767		612%	71%
	2026	726,568		679%	72%
	2027	643,100		756%	72%
	2028	567,671	4,771,872	841%	73%
Projected	2029	500,153	4,658,821	931%	73%
Future	2030	439,349	4,527,625	1,031%	74%
Experience	2031	384,846	4,380,644	1,138%	74%
(60 Years)	2032	336,180	4,220,083	1,255%	75%
	2033	292,862	4,051,822	1,384%	75%
	2034	254,333	3,882,637	1,527%	75%
	2035	220,177	3,712,653	1,686%	76%
	2036	190,008	3,539,149	1,863%	76%
	2037	163,449		2,057%	76%
	2038	140,170		2,270%	76%
	2039	119,820		2,506%	77%
	2040	102,134		2,766%	77%
	2041	86,776		3,056%	77%
	2042	73,508	, ,	3,380%	77%
	2043	62,056		3,749%	77%
	2044	52.235	' '	4,163%	77%
	2045	43,826	, ,	4,629%	77%
	2046	36,670		5,152%	78%
		,			78% 78%
	2047	30,589		5,736%	78% 78%
	2048-2052	90,419		7,699%	78%
	2053-2057	33,963		13,172%	_
	2058-2062	11,696		21,982%	78%
	2063-2067	3,477	, ,	35,818%	78%
	2068-2072	793		59,736%	78%
	2073-2077	119	144,076	121,257%	78%

With Interest Accum./Disc. To 12/31/2017 at Max. Val. Interest

History	515,863,269	339,834,505	66%
Future	11,442,015	72,686,785	635%
Lifetime	527,305,284	412,521,289	78%

^{*}Estimated as described in Section 15 of the actuarial memorandum

Attachment 1-b

Business Acquired from ERC

Written Premium and Paid Claim Experience and Projections by Calendar Year Nationwide Experience After Requested Rate Increase **All Policies**

		Actual or Pr	ojected Experienc	ce using Current	
			Without Interest		Cumulative Loss
	Calendar	Written	Paid	Loss	Ratio w/ Max.
	Year	Premium	Claims	Ratio	Val. Interest
	Prior to 1990*	22,204,897	3,604,031	16%	16%
	1990-1994*	49,026,766		53%	39%
	1995-1999*	33,350,613	28,711,199	86%	51%
	2000*	5,790,092	5,034,823	87%	52%
	2001*	5,735,776	4,874,957	85%	54%
	2002*	5,833,638	4,788,223	82%	54%
	2003*	5,536,421	4,753,542	86%	55%
	2004	4,747,261	2,836,153	60%	56%
Historical	2005	4,379,669	4,326,888	99%	56%
Experience	2006	4,011,006		126%	57%
	2007	3,709,397	4,711,595	127%	58%
	2008	3,447,243	5,030,994	146%	59%
	2009	3,171,942	4,731,453	149%	60%
	2010	3,259,534	4,096,811	126%	61%
	2011	3,088,325	3,896,405	126%	62%
	2012	2,862,195	3,896,892	136%	62%
	2013	2,652,869	4,085,776	154%	63%
	2014	2,455,077	4,471,962	182%	63%
	2015	2,277,583	4,483,405	197%	64%
	2016	2,087,563	5,307,192	254%	65%
	2017	1,873,135	5,934,809	317%	66%
	2018	1,699,608	4,880,157	287%	67%
	2019	2,726,157	4,897,788	180%	67%
	2020	2,834,714	4,688,265	165%	68%
	2021	2,573,787	4,656,086	181%	68%
	2022	2,329,713	4,601,361	198%	69%
	2023	2,102,486	4,505,931	214%	69%
	2024	1,889,383	4,389,310	232% 252%	69%
	2025 2026	1,694,457	4,277,086 4,173,627	275%	70% 70%
	2027	1,514,959 1,345,369	4,173,027	303%	70%
	2028	1,193,028	3,962,561	332%	71%
Projected	2029	1,055,999	3,839,930	364%	71%
Future	2030	931,771	3,706,879	398%	72%
Experience	2030	819,662	3,700,879	435%	72% 72%
(60 Years)	2032	718,903	3,415,673	475%	72% 72%
(00 rears)	2033	628,615	3,263,499	519%	72%
	2034	547,789	3,113,533	568%	73%
	2035	475,709	2,965,621	623%	73%
	2036	411,666	2,817,317	684%	73%
	2037	355,006	2,667,959	752%	73%
	2038	305,108	2,518,390	825%	74%
	2039	261,309	2,370,363	907%	74%
	2040	223,114	2,224,820	997%	74%
	2041	189,843	2,082,850	1,097%	74%
	2042	161,003	1,947,186	1,209%	74%
	2043	136,062	1,818,961	1,337%	74%
	2044	114,615	1,696,499	1,480%	74%
	2045	96,219	1,579,522	1,642%	74%
	2046	80,522	1,468,038	1,823%	74%
	2047	67,154	1,360,909	2,027%	74%
	2048-2052	197,835	5,385,794	2,722%	75%
	2053-2057	73,102	3,458,864	4,732%	75%
	2058-2062	24,518	1,985,824	8,100%	75%
	2063-2067	7,136	958,788	13,437%	75%
1	2068-2072	1,619	363,371	22,446%	75%
	2073-2077	244	110,009	45,107%	75%

With Interest Accum./Disc. To 12/31/2017 at Max. Val. Interest

****	iii iiiterest Accum./i	DI3C. 10 12/01/20	r at wax. val. litte	
History	515,863,269	339,834,505	66%	
Future	21,486,699	62,709,766	292%	
Lifetime	537,349,968	402,544,270	75%	

^{*}Estimated as described in Section 15 of the actuarial memorandum

Attachment 2-a Business Acquired from ERC

Earned Premium and Incurred Claim Experience and Projections by Calendar Year Pennsylvania-Specific Experience Before Requested Rate Increase All Policies

		Loss Ratio Demonstration							
	1		Without Interest	0.5/4		With Max. Val. Interest			
		Α	В	C = B / A	D	Е	F	G = F / E	
	Calendar	Earned	Incurred	Incurred	End of Year	Earned	Incurred	Incurred	
	Year	Premium	Claims	Loss Ratio	Lives	Premium	Claims	Loss Ratio	
	Prior to 1990*	0	0	0%	Lives 0	0	Olalins 0	0%	
	1990-1994*	233	46	20%	277	733	146	20%	
	1995-1999*	565,528	119,740	21%	1,536	1,496,630	313,248	21%	
	2000*	120,287	25,407	21%	333	272,980	57,185	21%	
	2001*	173,161	28,692	17%	406	369,421	61,427	17%	
	2002*	247,654	33,754	14%	472	499,892	68,702	14%	
	2003*	305,561	39,226	13%	464	587,122	76,076	13%	
	2004	283,484	13,202	5%	439	520,908	23,917	5%	
Historical	2005	275,928	1,174	0%	424	484,805	2,035	0%	
Experience	2006	265,581	0	0%	409	445,898	0	0%	
	2007	260,303	53,323	20%	402	417,758	84,792	20%	
	2008 2009	252,285 235,423	543 25,708	0% 11%	391 378	387,161 345,529	825 37,761	0% 11%	
	2010	226,684	9,711	4%	376 371	318,034	13,509	4%	
	2010	220,972	9,248	4%	360	296,338	12,699	4%	
	2012	214,636	296,776	138%	354	275,150	388,124	141%	
	2013	209,013	51,820	25%	336	256,078	63,171	25%	
	2014	204,751	106,267	52%	329	239,783	125,895	53%	
	2015	199,441	443,743	222%	323	223,272	496,849	223%	
	2016	196,253	546,740	279%	316	210,006	585,113	279%	
	2017	183,652	253,816	138%	302	187,845	259,513	138%	
	2018	174,174	279,808	161%	291	170,283	273,495	161%	
	2019	165,222	295,766	179%	280	154,393	276,178	179%	
	2020	156,207	311,934	200%	268	139,512	278,242	199%	
	2021 2022	147,195	330,012	224%	257	125,642	281,168	224%	
	2022	138,238 129,380	350,279 371,172	253% 287%	245 234	112,765 100,854	285,044 288,469	253% 286%	
	2023	120,653	394,329	327%	222	89,869	292,708	326%	
	2025	112,091	418,479	373%	211	79,772	296,654	372%	
	2026	103,728	440,096	424%	200	70,525	297,950	422%	
	2027	95,579	460,291	482%	189	62,077	297,549	479%	
	2028	87,684	477,055	544%	178	54,396	294,386	541%	
Projected	2029	80,074	490,403	612%	167	47,442	288,882	609%	
Future	2030	72,778	500,945	688%	156	41,175	281,680	684%	
Experience	2031	65,842	505,971	768%	146	35,566	271,555	764%	
(60 Years)	2032	59,297	503,667	849%	136	30,578	257,942	844%	
	2033	53,152	499,933	941%	126	26,162	244,403	934%	
	2034 2035	47,419 42,104	502,316 498,117	1,059% 1,183%	117 108	22,275 18,872	234,331 221,730	1052% 1175%	
	2036	37,222	489,221	1,314%	99	15,917	207,672	1305%	
	2037	32,763	477,333	1,457%	91	13,364		1446%	
	2038	28,716	462,753	1,611%	83			1598%	
	2039	25,072	445,935	1,779%	75	9,302	164,050	1764%	
	2040	21,812	427,859	1,962%	68	7,716	150,017	1944%	
	2041	18,904	408,934	2,163%	61	6,376	136,686	2144%	
	2042	16,317	392,210	2,404%	55	5,247	125,092	2384%	
	2043	14,024	379,809	2,708%	49	4,299		2689%	
	2044	12,001	359,363	2,995%	43	3,507	104,369	2976%	
	2045	10,218	338,530	3,313%	38	2,847	93,794	3295%	
	2046	8,654	315,711 289,854	3,648%	33	2,298	83,452	3631% 3061%	
	2047 2048-2052	7,284 21,451	1,007,710	3,979% 4,698%	29 91	1,844 4,802	73,039 222,865	3961% 4641%	
	2053-2057	7,193	427,692	5,946%	35	1,273	74,524	5852%	
	2058-2062	1,831	128,213	7,002%	10	257	17,701	6881%	
	2063-2067	335	25,485	7,600%	2	38	2,801	7442%	
	2068-2072	41	3,023	7,410%	0	4	268	7253%	
	2073-2077	3	202	7,310%	0	0	15	7146%	
									
Hist	•	4,640,830	2,058,935	44%	8,622	7,835,344	2,670,987	34%	
Fut		2,114,660	14,010,412	663%	4,393	1,472,421	6,906,074	469%	
Lifet		6,755,489	16,069,347	238%	13,014	9,307,765	9,577,061	103%	

^{*}Estimated as described in Section 15 of the actuarial memorandum

Attachment 2-b Business Acquired from ERC

Earned Premium and Incurred Claim Experience and Projections by Calendar Year Pennsylvania-Specific Experience After Requested Rate Increase All Policies

		Loss Ratio Demonstration							
			Without Interest	0.5/4	5	With Max. Val. Interest			
		Α	В	C = B / A	D	E	F	G = F / E	
	Calendar	Earned	Incurred	Incurred	End of Year	Earned	Incurred	Incurred	
	Year	Premium	Claims	Loss Ratio	Lives	Premium	Claims	Loss Ratio	
	Prior to 1990*	0	0	0%	Lives 0	0	Olaillis 0	0%	
	1990-1994*	233	46	20%	277	733	146	20%	
	1995-1999*	565,528	119,740	21%	1,536	1,496,630	313,248	21%	
	2000*	120,287	25,407	21%	333	272,980	57,185	21%	
	2001*	173,161	28,692	17%	406	369,421	61,427	17%	
	2002*	247,654	33,754	14%	472	499,892	68,702	14%	
	2003*	305,561	39,226	13%	464	587,122	76,076	13%	
	2004	283,484	13,202	5%	439	520,908	23,917	5%	
Historical	2005	275,928	1,174	0%	424	484,805	2,035	0%	
Experience	2006	265,581	0	0%	409	445,898	0	0%	
	2007	260,303	53,323	20%	402	417,758	84,792	20%	
	2008 2009	252,285 235,423	543 25,708	0% 11%	391 378	387,161 345,529	825 37,761	0% 11%	
	2010	226,684	9,711	4%	376 371	318,034	13,509	4%	
	2010	220,972	9,248	4%	360	296,338	12,699	4%	
	2012	214,636	296,776	138%	354	275,150	388,124	141%	
	2013	209,013	51,820	25%	336	256,078	63,171	25%	
	2014	204,751	106,267	52%	329	239,783	125,895	53%	
	2015	199,441	443,743	222%	323	223,272	496,849	223%	
	2016	196,253	546,740	279%	316	210,006	585,113	279%	
	2017	183,652	253,816	138%	302	187,845	259,513	138%	
	2018	174,174	279,808	161%	291	170,283	273,495	161%	
	2019	240,681	277,005	115%	247	225,029	258,616	115%	
	2020	357,414	252,318	71%	237	319,062	225,121	71%	
	2021 2022	338,282 319,183	265,608 280,631	79% 88%	227 217	288,557 260,146	226,373 228,465	78% 88%	
	2023	300,199	296,146	99%	207	233,769	230,278	99%	
	2024	281,388	313,477	111%	197	209,340	232,829	111%	
	2025	262,821	331,584	126%	187	186,785	235,211	126%	
	2026	244,566	347,692	142%	177	166,026	235,562	142%	
	2027	226,648	362,482	160%	167	146,957	234,507	160%	
	2028	209,151	374,231	179%	157	129,512	231,130	178%	
Projected	2029	192,152	383,207	199%	147	113,622	225,935	199%	
Future	2030	175,724	389,873	222%	138	99,212	219,423	221%	
Experience	2031	159,969	392,303	245%	129	86,225	210,742	244%	
(60 Years)	2032	144,966	389,040	268%	120	74,588	199,419	267%	
	2033 2034	130,752	384,825	294%	111	64,209	188,296	293%	
	2035	117,372 104,850	385,334 380,971	328% 363%	103 95	55,004 46,883	179,912 169,725	327% 362%	
	2036	93,233	373,044	400%	87	39,772	158,483		
	2037	82,520	362,923	440%	80	33,579	146,999	438%	
	2038	72,710	350,900	483%	73	28,219	135,502	480%	
	2039	63,801	337,356	529%	66	23,614	124,193	526%	
	2040	55,762	322,978	579%	60	19,679	113,319	576%	
	2041	48,530	308,041	635%	54	16,330	103,027	631%	
	2042	42,048	294,896	701%	48	13,489	94,109	698%	
	2043	36,262	285,051	786%	43	11,090	86,811	783%	
	2044	31,122	269,275	865%	38	9,073	78,244	862%	
	2045 2046	26,566 22,546	253,321 236,030	954% 1,047%	33 29	7,383 5,972	70,219 62,418	951% 1045%	
	2046	19,007	236,030	1,047%	29 25	5,972 4,799	52,418 54,587	1137%	
	2048-2052	56,086	751,839	1,139%	81	12,519	166,361	1329%	
	2053-2057	18,737	319,054	1,703%	31	3,305	55,623	1683%	
	2058-2062	4,706	95,951	2,039%	9	658	13,257	2015%	
	2063-2067	845	19,125	2,262%	2	94	2,104	2233%	
	2068-2072	101	2,274	2,247%	0	9	202	2223%	
	2073-2077	7	152	2,259%	0	0	11	2240%	
	tory	4,640,830	2,058,935	44%	8,622	7,835,344	2,670,987	34%	
Fut		4,654,880	10,885,276	234%	3,913	3,104,792	5,470,511	176%	
Life		9,295,710	12,944,211	139%	12,535	10,940,136	8,141,497	74%	

^{*}Estimated as described in Section 15 of the actuarial memorandum

Attachment 3-a Business Acquired from ERC

Written Premium and Paid Claim Experience and Projections by Calendar Year Pennsylvania-Specific Experience Before Requested Rate Increase All Policies

		Actual or Pr	ojected Experienc	e using Current	
			Without Interest		Cumulative Loss
	Calendar	Written	Paid	Loss	Ratio w/ Max.
	Year	Premium	Claims	Ratio	Val. Interest
	Prior to 1990*	0	0	0%	0%
	1990-1994*	40,171	10	0%	0%
	1995-1999*	563,339	70,101	12%	11%
	2000*	126,676	22,343	18%	12%
	2001*	179,602	24,510	14%	12%
	2002*	277,284	27,290	10%	12%
	2002*	301,843	30,793	10%	12%
	2004	280,766	,	20%	13%
1.15 - 451			56,928		
Historical	2005	275,197	53,015	19%	14%
Experience	2006	262,926	13,898	5%	13%
	2007	258,888	0	0%	12%
	2008	251,030	41,700	17%	12%
	2009	225,554	23,772	11%	12%
	2010	226,427	10,775	5%	12%
	2011	220,393	15,712	7%	12%
	2012	213,681	51,896	24%	12%
	2013	208,106	85,402	41%	13%
	2014	204,342	101,669	50%	14%
	2015	198,957	129,547	65%	16%
	2016	193,862	319,997	165%	20%
	2017	176,075	414,372	235%	25%
	2018	172,066	272,742	159%	27%
	2019	163,113	285,588	175%	30%
	2020	154,113	290,915	189%	33%
	2021	145,126	310,113	214%	35%
	2022	136,206	330,273	242%	38%
	2023	127,387	349,436	274%	41%
	2024	118,701	368,673	311%	43%
	2025	110,184	389,635	354%	46%
	2026	101,859	411,588	404%	49%
	2027	93,756	433,998	463%	52%
	2028	85,911	455,649	530%	54%
Projected	2029	78,352	475,762	607%	57%
Future	2030	71,120	493,883	694%	60%
		64,253			
Experience	2031		509,238	793%	63%
(60 Years)	2032	57,784	520,673	901%	65%
	2033	51,723	528,171	1,021%	68%
	2034	46,073	533,790	1,159%	70%
	2035	40,853	536,995	1,314%	73%
	2036	36,062	537,113	1,489%	75%
	2037	31,695	533,981	1,685%	77%
	2038	27,741	527,647	1,902%	79%
	2039	24,187	518,356	2,143%	81%
	2040	21,012	506,519	2,411%	83%
	2041	18,181	492,366	2,708%	85%
	2042	15,666	476,675	3,043%	86%
		· ·	460,931	· ·	
	2043	13,442	,	3,429%	88%
	2044	11,479	444,137	3,869%	89%
	2045	9,752	425,977	4,368%	919
	2046	8,239	406,413	4,933%	92%
	2047	6,916	385,086	5,568%	93%
	2048-2052	20,204	1,535,853	7,602%	969
	2053-2057	6,645	857,079	12,898%	98%
	2058-2062	1,649	363,676	22,060%	98%
	2063-2067	289	116,745	40,440%	98%
	2068-2072	32	28,223	87,189%	98%

With Interest Accum./Disc. To 12/31/2017 at Max. Val. Interest

****	iii iiitoroot Aooaiii.	D130. 10 12/01/20	i i at max. val. ilitoi	•
History	7,987,543	1,968,718	25%	
Future	1,446,393	7,322,950	506%	
Lifetime	9,433,937	9,291,668	98%	

^{*}Estimated as described in Section 15 of the actuarial memorandum

Attachment 3-b

Business Acquired from ERC

Written Premium and Paid Claim Experience and Projections by Calendar Year Pennsylvania-Specific Experience After Requested Rate Increase **All Policies**

		Actual	or Pr		ce using Current	Assumptions
				Without Interest		Cumulative Loss
	Calendar	Writter	1	Paid	Loss	Ratio w/ Max.
	Year	Premiur	n	Claims	Ratio	Val. Interest
	Prior to 1990*		0	0	0%	0%
	1990-1994*	4	0,171	10	0%	0%
	1995-1999*	56	3,339	70,101	12%	11%
	2000*		6,676	22,343		
	2001*		9,602	24,510		
	2002*		7,284	27,290	10%	
	2003*		1,843	30,793		
	2004		0,766	56,928		
Historical	2005		5,197	53,015		
Experience	2006		2,926	13,898		
Experience	2007		8,888	0,000		
	2008		1,030	41,700		
			-			
	2009		5,554	23,772		
	2010		6,427	10,775		
	2011		0,393	15,712		
	2012		3,681	51,896		
	2013		8,106	85,402	41%	
	2014		4,342	101,669		
	2015		8,957	129,547	65%	
	2016		3,862	319,997	165%	
	2017		6,075	414,372	235%	
	2018		2,154	272,742		
	2019		1,383	281,642		
	2020	35	2,888	274,726	78%	
	2021	33	3,771	280,643	84%	33%
	2022	31	4,712	289,252	92%	35%
	2023	29	5,772	298,179	101%	36%
	2024	27	7,012	308,112	111%	38%
	2025	25	8,509	320,401	124%	39%
	2026	24	0,300	334,372	139%	41%
	2027		2,446	349,397		43%
	2028		5,029	364,150		
Projected	2029		8,118	377,861	201%	
Future	2030		1,805	390,082		
Experience	2031		6,184	400,203		
(60 Years)	2032		1,336	407,321	288%	
(00 Tears)	2032		7,297	411,455		
	2034		4.093	414,189	363%	
			′ .			
	2035		1,775	415,147	408%	
	2036		0,360	413,816		
	2037		9,858	410,079		
	2038		0,262	403,990		
	2039		1,565	395,759	643%	
	2040		3,725	385,706	718%	
	2041		6,680	374,006	801%	
	2042		0,373	361,253	895%	
	2043		4,758	348,558	1,003%	
	2044		9,769	335,174	1,126%	
	2045		5,355	320,868	1,265%	
	2046	2	1,464	305,625	1,424%	
	2047	1	8,048	289,170	1,602%	68%
	2048-2052	5	2,826	1,150,010	2,177%	
	2053-2057		7,313	640,099	3,697%	
	2058-2062		4,241	271,640	6,405%	
	2063-2067		730	87,312	11,962%	
	2068-2072		81	21,136	· ·	
	2073-2077		5	3,908	· ·	
<u> </u>		L		-,,,,,,,	,	

With Interest Accum./Disc. To 12/31/2017 at Max. Val. Interest

History	7,987,543	1,968,718	25%
Future	3,099,176	5,951,090	192%
Lifetime	11,086,720	7,919,809	71%

^{*}Estimated as described in Section 15 of the actuarial memorandum

Attachment 4 Business Acquired from ERC Breakdown of Historical Incurred Claims and Reserve Balances at December 31, 2017 All Policies

Nationwide Experience

		Discount	ed to the Year of	f Incurral		Year-End
Incurred	Incurred	Paid	Disabled	IBNR	Total Claim	Active Life
Year	Claims ^[1]	Claims	Life Reserve	Reserve	Reserve ^[2]	Reserve ^[3]
Prior to 1990*	11,763,375	11,763,375	0		0	
1990-1994*	33,451,695	33,451,695	0		0	
1995-1999*	22,595,289	22,595,289	0		0	
2000*	3,973,312	3,973,312	0		0	
2001*	4,024,540	4,024,540	0		0	
2002*	4,182,431	4,182,431	0		0	
2003*	4,283,850	4,283,850	0		0	
2004	3,867,067	3,867,067	0		0	
2005	5,230,993	5,230,993	0		0	
2006	4,493,396	4,460,508	32,888		32,888	
2007	3,973,568	3,973,568	0		0	
2008	4,456,795	4,382,417	74,378		74,378	
2009	3,296,327	3,281,429	14,898		14,898	
2010	3,996,079	3,996,079	0		0	
2011	3,316,985	3,116,166	200,819		200,819	
2012	4,440,508	4,312,202	128,306		128,306	
2013	4,314,175	3,778,756	535,419		535,419	
2014	4,577,100	3,662,203	914,897		914,897	
2015	6,125,594	4,358,582	1,767,012		1,767,012	
2016	6,939,547	2,524,389	4,415,158		4,415,158	
2017	5,139,462	622,940	3,810,084	706,438	4,516,522	21,021,748

Pennsylvania-Specific Experience

		Discount	ted to the Year o	f Incurral		Year-End
Incurred	Incurred	Paid	Disabled	IBNR	Total Claim	Active Life
Year	Claims ^[1]	Claims	Life Reserve	Reserve	Reserve ^[2]	Reserve ^[3]
Prior to 1990*	0	0	0		0	
1990-1994*	46	46	0		0	
1995-1999*	119,740	119,740	0		0	
2000*	25,407	25,407	0		0	
2001*	28,692	28,692	0		0	
2002*	33,754	33,754	0		0	
2003*	39,226	39,226	0		0	
2004	13,202	13,202	0		0	
2005	1,174	1,174	0		0	
2006	0	0	0		0	
2007	53,323	53,323	0		0	
2008	543	543	0		0	
2009	25,708	25,708	0		0	
2010	9,711	9,711	0		0	
2011	9,248	9,248	0		0	
2012	296,776	248,183	48,594		48,594	
2013	51,820	51,820	0		0	
2014	106,267	106,267	0		0	
2015	443,743	384,887	58,856		58,856	
2016	546,740	226,229	320,512		320,512	
2017	253,816	10,465	189,793	53,558	243,351	3,850,532

^{*}Estimated as described in Section 15 of the actuarial memorandum

^[1] Incurred claims are the sum of paid claims, disabled life reserve, and incurred but not reported (IBNR) reserve.

^[2] Claim reserve is the sum of disabled life reserve and IBNR reserve.

^[3] Active life reserve is defined as interpolated terminal reserves plus unearned premium reserves.

Attachment 5-a Business Acquired from ERC Nationwide Experience and Projections by Policy Year - Before Requested Rate Increase All Policies

	Actua	I and Projected	Experience using	Current Assump	
Policy	Earned	Incurred	Incurred	End of Year	Cumulative Loss Ratio w/ Max.
Year*	Premium	Claims	Loss Ratio	Lives	Val. Interest
1	18,512,044	6,762,199	37%	11,343	37%
2	16,535,343	7,665,328	46%	10,488	41%
3	14,980,980	7,998,642	53%	9,777	45%
4	13,627,727	8,052,946	59%	9,087	47%
5	12,378,885	7,762,684	63%	8,479	50%
6	11,241,590	7,702,084	67%	7,882	52%
7	10,135,433	6,269,666	62%	7,002	52% 52%
8	9,162,884	6,118,758	67%	6,729	53%
9	8,318,043	6,748,261	81%	6,263	55%
10	7,573,945	5,676,279	75%	5,828	56%
11	6,874,411	5,809,188	85%	5,429	57%
12	6,283,275	4,889,524	78%	5,049	58%
13	5,760,140	5,728,313	99%	4,685	59%
14	5,258,595	6,977,084	133%	4,353	61%
15	4,754,649	6,730,347	142%	3,996	62%
16	4,734,849	6,667,524	157%	3,651	64%
17	3,745,831	8,001,990	214%	3,300	66%
18	3,327,500	7,679,591	231%	2,993	68%
19	2,962,777	6,787,137	229%	2,705	69%
20	2,633,258	7,879,420	299%	2,461	71%
21	2,348,569	7,079,420	300%	2,232	73%
22	2,112,771	6,567,674	311%	2,003	74%
23	1,879,857	5,220,001	278%	1,661	75%
24	1,679,059	6,035,402	359%	1,624	76%
25	1,470,944	6,113,280	416%	1,465	77%
26	1,290,782	6,663,048	516%	1,304	79%
27	1,125,020	5,851,335	520%	1,175	80%
28	979,055	5,687,353	581%	1,045	81%
29	849,307	4,926,212	580%	928	82%
30	732,457	4,786,517	653%	828	82%
31	632,935	4,555,899	720%	737	83%
32	544,476	4,255,950	782%	653	84%
33	466,788	3,987,080	854%	579	84%
34	399,111	3,720,509	932%	513	85%
35	340,437	3,451,708	1,014%	455	85%
36	289,849	3,186,244	1,099%	403	86%
37	246,413	2,930,612	1,189%	357	86%
38	209,210	2,692,673	1,287%	317	86%
39	177,478	2,469,064	1,391%	282	86%
40	150,510	2,271,422	1,509%	250	87%
41	127,615	2,101,053	1,646%	222	87%
42	108,182	1,946,754	1,800%	198	87%
43	91,723	1,801,824	1,964%	176	87%
44	77,765	1,676,216	2,155%	156	87%
45	65,917	1,567,063	2,377%	139	88%
46	55,844	1,458,446	2,612%	123	88%
47	47,278	1,364,299	2,886%	109	88%
48	40,012	1,282,547	3,205%	96	88%
49	33,825	1,199,887	3,547%	84	88%
50	28,556	1,113,879	3,901%	74	88%
51-55	87,220	4,381,797	5,024%	246	88%
56-60	34,403	2,508,527	7,292%	108	88%
61-65	12,048	1,301,986	10,807%	40	88%
66-70	3,633	478,221	13,164%	12	88%
71-75	915	133,289	14,575%	3	88%
		.55,250	,5. 5.70	<u> </u>	3370
Total	187,042,126	254,444,764	136%	142,327	88%
	s are estimated as de				

^{*}Certain durations are estimated as described in Section 15 of the actuarial memorandum

Attachment 5-b Business Acquired from ERC Nationwide Experience and Projections by Policy Year - After Requested Rate Increase All Policies

	Actua	I and Projected	Experience using	Current Assump	tions
					Cumulative Loss
Policy	Earned	Incurred	Incurred	End of Year	Ratio w/ Max.
Year*	Premium	Claims	Loss Ratio	Lives	Val. Interest
1	18,512,044	6,762,199	37%	11,343	37%
2	16,535,343	7,665,328	46%	10,488	41%
3	14,980,980	7,998,642	53%	9,777	45%
4	13,627,727	8,052,946	59%	9,087	47%
5	12,378,885	7,762,684	63%	8,479	50%
6	11,241,590	7,497,374	67%	7,882	52%
7	10,135,433	6,269,666	62%	7,233	52%
8	9,162,884	6,118,758	67%	6,729	53%
9	8,318,043	6,748,261	81%	6,263	55%
10	7,573,945	5,676,279	75%	5,828	56%
11	6,874,411	5,809,188	85%	5,429	57%
12	6,283,275	4,889,524	78%	5,049	58%
13	5,760,140	5,728,313	99%	4,685	59%
14	5,258,595	6,977,084	133%	4,353	61%
15	4,754,669	6,730,342	142%	3,996	62%
16	4,243,045	6,665,933	157%	3,650	64%
17	3,847,063	7,982,464	207%	3,287	66%
18	3,700,692	7,597,699	205%	2,960	68%
19	3,587,597	6,610,604	184%	2,656	69%
20	3,394,666	7,589,920	224%	2,400	71%
21	3,181,020	6,664,864	210%	2,160	72%
22	3,014,965	6,069,551	201%	1,921	73%
23	2,774,454	4,637,106	167%	1,578	74%
24	2,533,451	5,404,764	213%	1,544	74%
25	2,271,700	5,449,387	240%	1,372	75%
26	2,090,770	5,947,758	284%	1,216	76%
27	1,873,340	5,108,159	273%	1,090	77%
28	1,704,211	4,907,120	288%	959	78%
29	1,551,190	4,113,101	265%	841	78%
30	1,398,820	3,953,479	283%	746	79%
31	1,245,045	3,723,634	299%	657	79%
32	1,094,773	3,438,952	314%	579	80%
33	952,423	3,199,023	336%	513	80%
34	820,682	2,972,636	362%	454	80%
35	704,551	2,747,845	390%	403	81%
36	603,674	2,528,116	419%	357	81%
37	516,389	2,317,890	449%	316	81%
38	441,084	2,123,103	481%	281	81%
39	376,391	1,940,682	516%	249	82%
40	321,015	1,779,776	554%	222	82%
41	273,665	1,641,306	600%	197	82%
42	233,189	1,516,349	650%	175	82%
43	198,673	1,399,656	705%	156	82%
44	169,210	1,299,140	768%	138	82%
45	144,045	1,212,069	841%	123	82%
46	122,525	1,126,314	919%	109	82%
47	104,115	1,052,482	1,011%	96	82%
48	88,402	989,240	1,119%	85	82%
49	74,942	924,960	1,234%	75	83%
50	63,416	858,464	1,354%	66	83%
51-55	194,365	3,371,904	1,735%	218	83%
56-60	76,379	1,924,123	2,519%	96	83%
61-65	26,291	994,428	3,782%	35	83%
66-70	7,747	363,871	4,697%	10	83%
71-75	1,909	101,078	5,296%	3	83%
	· · · · · · · · · · · · · · · · · · ·	, -	•		
Total	201,419,848	234,935,537	117%	140,614	83%

^{*}Certain durations are estimated as described in Section 15 of the actuarial memorandum

Attachment 6-a Business Acquired from ERC Pennsylvania-Specific Experience and Projections by Policy Year - Before Requested Rate Increase All Policies

	Actu	al and Projected	Experience using	Current Assump	tions
		•		•	Cumulative Loss
Policy	Earned	Incurred	Incurred	End of Year	Ratio w/ Max.
Year*	Premium	Claims	Loss Ratio	Lives	Val. Interest
1	356,117	42,853	12%	549	12%
2	331,686	39,876	12%	523	12%
3	312,587	33,071	11%	505	12%
4	302,827	26,904	9%	486	11%
5	291,701	42,449	15%	465	12%
6	278,966	58,866	21%	449	13%
7	266,243	22,323	8%	433	12%
8	251,001	39,272	16%	417	13%
9	243,893	22,227	9%	405	12%
10	238,256	27,701	12%	395	12%
11	230,122	27,701	0%	384	12%
12	225,798	1,405	1%	373	11%
13			70%	367	14%
	221,471	155,660			
14	214,630	56,404	26%	362	14%
15	206,678	124,434	60%	352	16%
16	198,754	181,011	91%	345	18%
17	193,032	99,046	51%	337	19%
18	185,992	435,315	234%	327	25%
19	175,800	313,910	179%	306	28%
20	167,173	264,293	158%	296	31%
21	157,437	471,764	300%	287	36%
22	149,837	437,063	292%	274	40%
23	137,638	315,884	230%	115	42%
24	128,240	338,891	264%	250	45%
25	119,608	359,842	301%	239	48%
26	111,198	379,214	341%	228	50%
27	103,046	396,506	385%	217	53%
28	95,184	410,750	432%	206	56%
29	87,655	423,775	483%	196	59%
30	80,495	433,212	538%	185	61%
31	73,729	440,919	598%	175	64%
32	67,358	448,701	666%	166	66%
33	61,365	458,632	747%	156	69%
34	55,768	465,561	835%	147	71%
35	50,565	467,752	925%	138	73%
36	45,737	466,100	1,019%	130	76%
37	41,268	458,435	1,111%	122	78%
38	37,148	446,630	1,202%	114	80%
39	33,366	433,643	1,300%	106	81%
40	29,902	428,170	1,432%	98	83%
41	26,721	422,660	1,582%	91	85%
42	23,802	416,473	1,750%	84	86%
43	21,133	409,692	1,939%	77	88%
44	18,699	400,094	2,140%	70	89%
45	16,490	387,518	2,350%	64	90%
46	14,486	371,269	2,563%	58	91%
47	12,670	351,970	2,778%	52	92%
48	11,026	329,618	2,989%	47	93%
49	9,549	309,973	3,246%	42	94%
50	8,228	285,867	3,474%	37	95%
51-55	25,922	1,091,843	4,212%	125	97%
56-60	10,064	570,272	5,666%	54	98%
61-65	3,058	214,273	7,008%	18	99%
66-70	673	54,306	8,066%	4	99%
71-75	100	8,628	8,659%	1	99%
11-10	100	0,028	0,009%	I	99%
Total	6,761,889	16,092,922	238%	12,449	99%
TOIAI	0,701,009	10,032,322	230%	12,449	9970

^{*}Certain durations are estimated as described in Section 15 of the actuarial memorandum

Attachment 6-b Business Acquired from ERC Pennsylvania-Specific Experience and Projections by Policy Year - After Requested Rate Increase All Policies

	Actu	al and Projected	Experience using	Current Assump	
					Cumulative Loss
Policy	Earned	Incurred	Incurred	End of Year	Ratio w/ Max.
Year*	Premium	Claims	Loss Ratio	Lives	Val. Interest
1	356,117	42,853	12%	549	12%
2	331,686	39,876	12%	523	12%
3	312,587	33,071	11%	505	12%
4	302,827	26,904	9%	486	11%
5	291,701	42,449	15%	465	12%
6	278,966	58,866	21%	449	13%
7	266,243	22,323	8%	433	12%
8	251,001	39,272	16%	417	13%
9	243,893	22,227	9%	405	12%
10	238,256	27,701	12%	395	12%
11	230,122	0	0%	384	12%
12	225,798	1,405	1%	373	11%
13	221,471	155,660	70%	367	14%
14	214,630	56,404	26%	362	14%
15	206,678	124,434	60%	352	16%
			91%		
16	198,909	180,986		345	18%
17	202,613	97,545	48%	335	19%
18	242,284	426,223	176%	320	24%
19	272,088	296,015	109%	296	27%
20	276,279	240,530	87%	286	29%
21	266,169	444,563	167%	276	33%
22	254,589	406,279	160%	263	36%
23	235,865	282,400	120%	105	38%
24	221,656	301,734	136%	240	40%
25	215,278	314,264	146%	211	42%
26	265,420	303,369	114%	201	44%
27	247,809	315,697	127%	191	45%
		·			
28	230,504	325,402	141%	182	47%
29	213,775	333,962	156%	173	48%
30	197,703	339,667	172%	164	50%
31	182,354	343,915	189%	155	51%
32	167,739	348,260	208%	146	52%
33	153,832	354,303	230%	138	54%
34	140,686	358,142	255%	130	55%
35	128,317	358,458	279%	122	56%
36	116,704	355,970	305%	115	58%
37	105,834	349,060	330%	107	59%
38	95,709	339,196	354%	100	60%
39				93	61%
	86,324	328,608	381%		
40	77,649	323,719	417%	87	62%
41	69,618	318,888	458%	80	63%
42	62,200	313,618	504%	74	64%
43	55,370	307,976	556%	68	65%
44	49,111	300,278	611%	62	66%
45	43,406	290,473	669%	57	66%
46	38,210	277,976	727%	51	67%
47	33,483	263,239	786%	46	68%
48	29,195	246,292	844%	41	68%
49	25,327	231,387	914%	37	69%
		· ·		33	
50	21,858	213,184	975%		69%
51-55	69,112	812,692	1,176%	110	71%
56-60	26,929	423,990	1,574%	48	71%
61-65	8,163	159,383	1,952%	16	71%
66-70	1,785	40,453	2,266%	4	71%
71-75	263	6,430	2,447%	1	71%
Total	9,302,095	12,967,974	139%	11,969	71%
	ne are estimated as d				

^{*}Certain durations are estimated as described in Section 15 of the actuarial memorandum

Attachment 7 **Business Acquired from ERC** Status of Filings as of June 11, 2019 All Jurisdictions in Which These Forms are In Force All Policy Forms

				Prior Rate	e Increases		Current	Requested In	creases		Average
		12/31/2017	12/31/2017	Average						Average	Cumulative
		Policies	Annualized	Filed	Implementation	Requested	14951	Date	Disposition	Filed	Increase
Jurisdiction	Company	In Force ^[1]	Premium ^[1]	Increase ^{[2][4]}	Year ^[2]	Increase ^[3]	Status ^{[4][5]}	Submitted	Date	Increase ^{[3][4]}	Filed ^{[2][4]}
Alaska	Central States Health & Life Company of Omaha	1	\$675				Not Filing				0%
Arkansas	Central States Health & Life Company of Omaha	2	\$1,819				Not Filing				0%
Arizona	Central States Health & Life Company of Omaha	6	\$4,556 \$1,397				Not Filing		ļ	Ļ	0% 0%
	MedAmerica Insurance Company	2	\$1,397				Not Filing				
California	Other Company In Pool	4	\$1,006 \$2.919				Not Filing Not Filing				0% 0%
California	Other Company In Pool Central States Health & Life Company of Omaha		\$2,919			205%	Not Yet Filed				0%
Connecticut	Central States Health & Life Company of Omaha Central States Health & Life Company of Omaha	13 23	\$47,890			194%	Filed	1/18/2019	3/15/2019	44%	44%
District of Columbia	Other Company In Pool	34	\$16.868			19470	Not Filing	1/10/2019	3/13/2019	44 70	0%
Florida	Central States Health & Life Company of Omaha	30	\$47,106			199%	Not Yet Filed				0%
rionad	Other Company In Pool	17	\$30.549			10070	Not Filing		l		0%
Georgia	Central States Health & Life Company of Omaha	16	\$19,099	10.0%	2010	148%	Pending	4/30/2019			10%
· ·	MedAmerica Insurance Company	7	\$9,623			148%	Pending	4/30/2019			0%
	Other Company In Pool	2	\$2,696			140%	Pending	4/30/2019			0%
lowa	Central States Health & Life Company of Omaha	18	\$14,982	10.0%	2010	199%	Filed	1/31/2019	3/18/2019	30%	43%
	MedAmerica Insurance Company	1	\$2,485			140%	Filed	1/31/2019	3/18/2019	30%	30%
Idaho	Central States Health & Life Company of Omaha	2	\$1,268				Not Filing				0%
Illinois	Other Company In Pool	110	\$204,207	L		279%	Pending	4/22/2019		↓	0%
	Central States Health & Life Company of Omaha	26	\$41,753	40.0%	2009 - 2010	157%	Pending	4/22/2019			40%
In Process	MedAmerica Insurance Company	5	\$12,964	05.00/	0000 0041	299%	Pending	4/22/2019	 	.	0%
Indiana	Central States Health & Life Company of Omaha	372	\$506,845 \$21,938	35.0%	2009 - 2011 2009 - 2010	121% 126%	Not Yet Filed Not Yet Filed				35% 20%
Kansas	Central States Health & Life Company of Omaha MedAmerica Insurance Company	- 8 - 5	\$21,936 \$12.171	20.0%	2009 - 2010	234%	Not Yet Filed		}		0%
Kentucky	Central States Health & Life Company of Omaha	5	\$3,775	20.0%	2010	234%	Not Filing				20%
Rentucky	MedAmerica Insurance Company	1	\$790	20.076	2010		Not Filing		<u> </u>	 	0%
Louisiana	Central States Health & Life Company of Omaha	18	\$19,989				Not Filing				0%
Louisiana	MedAmerica Insurance Company	4	\$5,001				Not Filing		 		0%
Maryland	Baltimore Life Insurance Company	1	\$3,394				Not Filing				0%
,	Other Company In Pool	61	\$54,181				Not Filing				0%
	Other Company In Pool	12	\$14,155				Not Filing				0%
Michigan	Central States Health & Life Company of Omaha	1	\$1,046	40.0%	2009 - 2010	185%	Pending	1/29/2019			40%
	MedAmerica Insurance Company	5	\$9,517			215%	Pending	1/29/2019			0%
Minnesota	Central States Health & Life Company of Omaha	11	\$16,028	40.0%	2009 - 2010	119%	Not Yet Filed				40%
Missouri	Other Company In Pool	7	\$3,602				Not Filing				0%
	Central States Health & Life Company of Omaha	6	\$6,340	25.0%	2010	141%	Withdrawn	2/15/2019	6/10/2019		25%
	Other Company In Pool	73	\$54,235			258%	Filed	2/15/2019	3/29/2019	52%	52%
North Carolina	Central States Health & Life Company of Omaha	5	\$7,004	20.0%	2010	1100/	Not Filing				20%
Nebraska	Central States Health & Life Company of Omaha	200 4	\$211,965	40.0%	2010 - 2011	119% 236%	Pending Not Yet Filed	1/17/2019			40% 0%
Marrada	MedAmerica Insurance Company	2	\$4,735			230%					0%
Nevada Ohio	MedAmerica Insurance Company Central States Health & Life Company of Omaha	5	\$4,180 \$8,133	20.0%	2009 - 2010		Not Filing Not Filing		 	-	20%
Oillo	MedAmerica Insurance Company	1	\$6,133 \$1,058	20.070	2009 - 2010	 	Not Filing		}	 	0%
	Other Company In Pool	1	\$1,773			 	Not Filing		}	 	0%
Oklahoma	Central States Health & Life Company of Omaha	8	\$7,738	15.0%	2009 - 2010	198%	Filed	4/23/2019	5/16/2019	32%	52%
o manoma	MedAmerica Insurance Company	3	\$4,370	10.070		195%	Filed	4/23/2019	5/17/2019	32%	32%
Oregon	Central States Health & Life Company of Omaha	29	\$16,246	10.0%	2010		Not Yet Filed	==	1	1	10%
. 3	MedAmerica Insurance Company	1	\$1,137	T		142% 299%	Not Yet Filed			t	0%
Pennsylvania	Baltimore Life Insurance Company	94	\$91,221			173%	Not Yet Filed				0%
	Central States Health & Life Company of Omaha	7	\$4,887			196%	Pending	2/14/2019	[I	0%
	Highmark Life	193	\$64,271			268%	Pending	2/14/2019	[I	0%
	MedAmerica Insurance Company	8	\$18,217			214%	Pending	2/14/2019			0%
South Carolina	Central States Health & Life Company of Omaha	40	\$43,692	20.0%	2009 - 2010	125% 299%	Pending	2/19/2019	<u> </u>		20%
0 4 5	MedAmerica Insurance Company	4	\$5,420	40		299%	Pending	2/19/2019			0%
South Dakota	Central States Health & Life Company of Omaha	4	\$9,454	40.0%	2009 - 2010		Not Filing				40%
Tennessee	Central States Health & Life Company of Omaha	5	\$8,323	20.0%	2009	1050/	Not Filing			1	20%
Texas	Central States Health & Life Company of Omaha	23	\$31,053	25.0%	2009	165%	Not Yet Filed		ļ		25% 0%
\/irai=!=	MedAmerica Insurance Company Central States Health & Life Company of Omaha	1	\$2,833	ļ		140%	Not Yet Filed			1	0%
Virginia	Other Company In Pool	1 5	\$1,682 \$4,051			}	Not Filing Not Filing		}	 	0% 0%
Washington	Central States Health & Life Company of Omaha	18	\$4,051	10.0%	2010	134%	Not Yet Filed			1	10%
Wisconsin	Central States Health & Life Company of Omaha Central States Health & Life Company of Omaha	15	\$10,952	40.0%	2009 -2010	148%	Not Yet Filed			1	40%
WISCONSIII	MedAmerica Insurance Company	2	\$6,255			299%	Not Yet Filed			l	0%
11 Excludes policies a	ssumed to be paid up prior to implementation of the re			zed premium refle			e nationwide				070

^[1] Excludes policies assumed to be paid up prior to implementation of the requested rate increase. Annualized premium reflects all rate increases filed for use nationwide.

Additionally, excludes the number of insureds and annualized premium in force for the short-term care policy form, which has 80 lives and \$27,979 annualized premium.

^[2] Captures only the rate increases that have been or are being filed with the department of insurance after MedAmerica had acquired the business.

[3] The requested rate increase level varies by inflation option, average rate increase percentages are based on the distribution of in-force business as of December 31, 2017.

[4] "Filed" is used in a generic sense to indicate that a rate increase has been approved, accepted, filed for use, etc., by a jurisdiction.

[5] The company is "Not Filing" in jurisdictions in which it is not practical due to a limited amount of in-force business or regulatory requirements.



Harold B. Rojas, Esq.

Senior Vice President, General Counsel, and Corporate Secretary

Letter of Authorization

To: Department of Insurance

MedAmerica Insurance Company ("MedAmerica") has entered into a service agreement with Milliman, Inc. ("Milliman") effective October 3, 2016, that includes long-term care rate filing services on our behalf. The agreement provides, in part, that Milliman is responsible for preparing and filing for approval with state insurance departments MedAmerica's long-term care rate increase filings as directed by MedAmerica. Milliman is also authorized to receive, on MedAmerica's behalf, written and oral communication from each state department of insurance for the purpose of completing the rate increase filing process.

MedAmerica is the reinsurer and/or administrator of a block of long-term care policies originally issued by the company.

Please accept this letter of authorization for the purpose stated above. Should you have any questions regarding the above, please forward your comments to:

MedAmerica Insurance Company 165 Court Street Rochester, NY 14647

-) (>	
10	May 29, 2019
Harold Rojas, Esq.	Date

MedAmerica Claim Administration and Processing Documentation

As the majority of policies to which this rate increase is applicable are eligible for a contingent benefit upon lapse, the following provides a demonstration that MedAmerica Insurance Company (MedAmerica) has consistently applied appropriate policy administration and claim processing procedures. These procedures are in place to assure that policyholders' long-term care claims are paid according to the provisions of our contracts.

Personal Care Advisors (PCAs) in our Claims Intake area determine whether a claimant qualifies for initial benefit eligibility, and create a plan of care for each eligible claimant. Our Rehabilitation/Case Management team then assigns a PCA to handle all aspects of the insured's contact with the Company, including care planning, ongoing care management, and supervision of claim payment.

While the PCAs are knowledgeable about all of the long term care products administered by the Company, each one specializes in a handful of products to increase claim payment accuracy. For chronically stable patients for whom rehabilitation is unlikely and site of care changes occur infrequently, specialized PCAs are assigned whose primary task is timely adjudication of claims and annual reassessment of benefit eligibility.

All claimants are reassessed at least once per year; claimants in Assisted Living or Home Care status are reassessed more frequently. All claims are reviewed prior to payment. Monthly claims audit procedures are in place. Anti-fraud activities are carried out by the staff of the Special Investigations Unit within our parent company.

MedAmerica management believes that these claims management practices are designed to pay claims correctly and help eliminate the potential for further deterioration of the policy form requiring further premium rate schedule increases.



8500 Normandale Lake Blvd. Suite 1850 Minneapolis, MN 55437-3830

Tel +1 952 897 5300 Fax +1 952 897 5301

milliman.com

June 19, 2019

David D'Agostino
Pennsylvania Insurance Department (Department)

Via SERFF

Re: Baltimore Life Insurance Company (Baltimore Life)
Company NAIC # 61212
SERFF Tracking # MILL-131857009
Baltimore Life Series
Comprehensive Form

5812S(PA)

Dear Mr. D'Agostino:

Thank you for reviewing this filing. This letter provides additional information requested in concurrent filings for business acquired from ERC. The remainder of this letter provides the additional information requested in the concurrent filings. The requests are restated in italics for reference.

 Of the [302] MedAmerica, Highmark, [Baltimore Life,] and CSO group certificates in force, how many were issued prior to 9/16/2002?

283 of the 302 policies from MedAmerica, Highmark, Baltimore Life, and CSO are in force in Pennsylvania and issued prior to September 16, 2002.

2. The Department would like to calculate the required rate increase using the Prospective Present Value method (i.e. the Texas Method) for the [302] MedAmerica, Highmark, [Baltimore Life,] and CSO group policies.

Please provide the following four calendar year projections for current premium paying Pennsylvania policyholders only, prior to the rate increase, and including margin for moderately adverse experience in PVFB, all discounted at the maximum valuation interest rate:

- 1. Present Value of Future Benefits (PVFB) under current assumptions
- 2. PVFB under prior assumptions (from prior rate increase filing or original pricing)
- 3. Present value of future premiums (PVFP) under current assumptions
- 4. PVFP under prior assumptions (from prior rate increase filing or original pricing)

To emphasize, these projections should include only active Pennsylvania policyholders currently paying premium, and should not include any policyholders not paying premium, regardless of the reason.

Attachments A and B to this letter provide the Pennsylvania-specific calendar year projections as requested above using current and expected pricing assumptions, respectively. Expected pricing assumptions are reflected in Attachment B as there has been no prior rate increase filing approved. While there are 302 policies that are in force, Attachments A and B include only the 294 policies that are currently paying premium as requested. Attachments A and B are provided in the enclosed Excel workbook, as commonly requested.

Offices in Principal Cities Worldwide

This work product was prepared solely to provide assistance to MedAmerica. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends recipient be aided by its own actuary or other qualified professional when reviewing the Milliman work product.

Mr. David D'Agostino 6/19/2019



The earned premium and incurred claims in Attachment B are for illustrative purposes only as the original pricing assumptions are not available for all forms. The expected pricing assumptions used in this filing reflect assumptions for each form or, if not available, the expected pricing assumptions from another individual or group policy form priced during a similar era, as described in Exhibit III of the enclosed actuarial memorandum.

Table 1 below provides a summary of the PVFB and PVFP provided in Attachments A and B.

Table 1 Business Acquired from ERC Active Lives Currently Paying Premium Projected Experience Before Requested Rate Increase Discounted to 12/31/2017 at Valuation Interest Rate^[1] Pennsylvania-Specific Policy Forms

Assumption Basis	PVFB ^[2]	PVFP ^[2]
Current ^[3]	\$7,581,268	\$1,267,630
Pricing ^[4]	6,818,710	958,054

[1] The maximum valuation interest rate for contract reserves applicable for the year of issue (ranges from 4.5% to 5.0%) was used for discounting projected experience.

[2] The future period includes all projected experience on or after January 1, 2019.

[3] PVFB are increased by 15% to reflect assumptions with moderately adverse experience (MAE).

[4] PVFB are increased by 10% to reflect assumptions with pricing MAE.

The formula and calculations below provide the results of the Prospective Present Value method using the values from Table 1. Because this filing includes policies that are subject to both loss ratio regulation and rate stability regulation (i.e., issued before and after September 16, 2002), we used the more restrictive version of the Prospective Present Value test that is for business subject to rate stability regulation.

$$\text{rate increase \% = } \frac{\Delta \text{PV(future incurred claims including margin)} - \left(\frac{.58 + .85 * C}{1 + C}\right) * \Delta \text{PV(future earned premiums)} }{.85 * \text{PV}_{\text{current}}(\text{future earned premiums})}$$

C = average cumulative % rate increase to date in Pennsylvania, which is 0%.

The rate increase that results from the above formula is 54%. Please note Pennsylvania-specific experience is not considered fully credible, but is provided as requested.

If we were to revise the calculation above and use nationwide experience restated to the Pennsylvania rate level, then the rate increase that results is 392%. The nationwide rate increase results are provided because the rate increase was developed using nationwide experience and is consistent with how the block is managed.

Limitations and Qualifications

Milliman's work has been prepared for the use and benefit of MedAmerica. Milliman's work may not be provided to third parties without Milliman's prior written consent. Milliman does not intend to benefit any third party recipient of its work product, even if Milliman consents to the release of its work product to such third party.

Milliman's work is being delivered to the Department, in accordance with its statutory and regulatory requirements. Milliman recognizes that materials it delivers to the Department may be public records subject to disclosure to third parties, however, Milliman does not intend to benefit and assumes no duty or liability to any third parties, including the Department, who receive Milliman's work and may include disclaimer language on its work product so stating. To the extent that Milliman's work is not subject to disclosure under applicable public records laws, the Department agrees that it shall not disclose Milliman's work product to third parties without Milliman's prior written consent; provided, however, that the Department may distribute Milliman's work to (i) its professional service providers who are subject

Mr. David D'Agostino 6/19/2019



to a duty of confidentiality and who agree to not use Milliman's work product for any purpose other than to provide services to the Department, or (ii) any applicable regulatory or governmental agency, as required.

In performing this analysis, we relied on data and other information provided by MedAmerica. We have not audited or verified this data and other information. If the underlying data or information is inaccurate or incomplete, the results of our analysis may likewise be inaccurate or incomplete. In that event, the results of our analysis may not be suitable for the intended purpose. We performed a limited review of the data used directly in our analysis for reasonableness and consistency and have not found material defects in the data. If there are material defects in the data, it is possible that they would be uncovered by a detailed, systematic review and comparison of the data to search for data values that are questionable or for relationships that are materially inconsistent. Such a review was beyond the scope of our assignment.

Differences between our projections and actual amounts depend on the extent to which future experience conforms to the assumptions made for this analysis. It is certain that actual experience will not conform exactly to the assumptions used in this analysis. Actual amounts will differ from projected amounts to the extent that actual experience deviates from expected experience.

I, Missy Gordon, am a Principal and Consulting Actuary for Milliman, Inc. I am a member of the American Academy of Actuaries and I meet the Qualification Standards of the American Academy of Actuaries to render an actuarial opinion as described herein.



David, thank you for working with us to complete this filing in Pennsylvania. Please let me know if you have any additional questions. You can reach me directly at (952) 820-2478 or by e-mail at missy.gordon@milliman.com. Alternatively, you may contact Michael Emmert, the contact of record for this filing, at (952) 820-3116 or by e-mail at michael.emmert@milliman.com.

Respectfully,

Missy Gordon, FSA, MAAA Principal and Consulting Actuary

MAG/dpl

Attachment A: Pennsylvania-Specific Active Lives Paying Premium Projected with Current Assumptions Attachment B: Pennsylvania-Specific Active Lives Paying Premium Projected with Pricing Assumptions

Enclosures: Response Attachments in Excel

Attachment A Business Acquired from ERC Pennsylvania-Specific Experience by Calendar Year Active Lives Currently Paying Premium All Policies

		Loss Ratio Demonstration using Current Assumptions				
		Without Interest			With Max. Val. Interest	
		Α	В	С	D	Е
	Calendar	Earned	Incurred	End of Year	Earned	Incurred
	Year	Premium	Claims ^[1]	Lives	Premium	Claims ^[1]
	2019	158,520	321,639	273	148,129	300,312
	2020	150,384	344,505	262	134,309	307,260
	2021	142,184	369,241	252	121,362	314,552
	2022	133,961	396,477	241	109,273	322,601
	2023	125,744	424,064	230	98,017	329,542
	2024	117,574	453,478	219	87,574	336,615
	2025	109,490	481,251	208	77,920	341,153
	2026	101,529	506,110	197	69,030	342,642
	2027	93,716	529,335	186	60,868	342,181
	2028	86,095	548,613	175	53,412	338,544
Projected	2029	78,712	563,963	164	46,637	332,214
Future	2030	71,606	576,086	154	40,514	323,932
Experience	2031	64,827	581,867	144	35,021	312,288
	2032	58,414	579,218	134	30,125	296,634
	2033	52,381	574,923	124	25,785	281,063
	2034	46,745	577,664	115	21,960	269,480
	2035	41,514	572,834	106	18,609	254,990
	2036	36,706	562,604	98	15,698	238,823
	2037	32,313	548,933	89	13,182	222,170
	2038	28,323	532,166	81	11,020	205,349
	2039	24,731	512,825	74	9,175	188,658
	2040	21,516	492,038	67	7,612	172,520
	2041	18,650	470,274	60	6,290	157,189
	2042	16,100	451,042	54	5,177	143,856
	2043	13,842	436,780	48	4,243	132,950
	2044	11,849	413,267	43	3,462	120,024
	2045	10,093	389,309	38	2,811	107,864
	2046	8,553	363,068	33	2,271	95,970
	2047	7,204	333,332	29	1,823	83,995
	2048-2052	21,263	1,158,867	91	4,758	256,295
	2053-2057	7,162	491,845	35	1,267	85,702
	2058-2062	1,829	147,445	10	257	20,356
	2063-2067	335	29,308	2	38	3,221
	2068-2072	41	3,477	0	4	308
	2073-2077	3	232	0	0	17
F. d.						
Future	(2019+)	1,893,907	15,738,081	4,035	1,267,630	7,581,268

^[1] The future projected incurred claims were increased by 15% to reflect current assumptions with moderately adverse experience.

Attachment B Business Acquired from ERC Pennsylvania-Specific Experience by Calendar Year Active Lives Currently Paying Premium All Policies

		Loss	Ratio Demonstrati	on using Expecte	d Pricing Assumpt	tions
		Without Interest			With Max. Val. Interest	
		А	В	С	D	E
	Calendar	Earned	Incurred	End of Year	Earned	Incurred
	Year	Premium	Claims ^[1]	Lives	Premium	Claims ^[1]
	2019	150,398	320,165	258	140,534	298,992
	2020	137,582	342,421	241	122,865	305,442
	2021	125,318	365,211	225	106,948	311,11
	2022	113,631	387,981	209	92,666	315,54
	2023	102,546	411,197	193	79,902	319,188
	2024	92,083	435,426	178	68,547	322,48
	2025	82,262	461,960	164	58,497	326,35
	2026	73,102	479,598	150	49,652	323,21
	2027	64,679	496,463	137	41,955	319,092
	2028	56,949	512,888	125	35,275	314,29
Projected	2029	49,927	529,524	114	29,526	309,27
Future	2030	43,579	548,060	103	24,603	305,03
Experience	2031	37,839	557,004	93	20,390	295,49
	2032	32,684	564,002	83	16,807	285,11
	2033	28,103	568,499	75	13,789	273,75
	2034	24,055	571,752	67	11,259	262,19
	2035	20,479	574,766	59	9,142	250,97
	2036	17,341	552,158	53	7,382	229,79
	2037	14,616	527,201	46	5,932	209,10
	2038	12,273	499,834	41	4,748	188,92
	2039	10,287	470,903	36	3,793	169,61
	2040	8,629	440,233	31	3,033	151,10
	2041	7,213	399,891	27	2,417	130,86
	2042	5,995	360,694	23	1,915	112,53
	2043	4,959	322,204	20	1,509	95,82
	2044	4,081	285,039	17	1,184	80,79
	2045	3,344	249,450	14	924	67,38
	2046	2,726	216,069	12	718	55,61
	2047	2,204	185,311	10	554	45,45
	2048-2052	5,794	547,607	28	1,293	118,80
	2053-2057	1,462	142,421	8	259	24,58
	2058-2062	244	4,412	1	34	70
	2063-2067	24	149	0	3	2
	2068-2072	0	0	0	0	_
	2073-2077	0	0	0	0	
Future ((2010±)	1,336,405	13,330,495	2,840	958,054	6,818,71

^[1] The future projected incurred claims were increased by 10% to reflect the expected pricing assumptions with moderately adverse experience.